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PC WORLD

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45

Hot Windows Tips

CHICAGO COUNTDOWN: The next Windows

SCAN & DELIVER: 17 scanners tested

REVIEWS: CorelDraw 5.0, ACT 2.0

UPGRADES: Pentium OverDrive

SOHO: Ergonomics

ISSN 0813-1384

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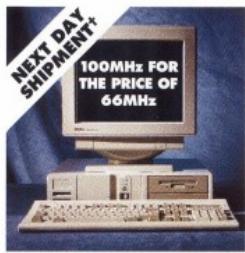
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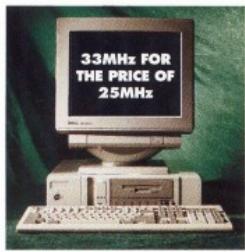
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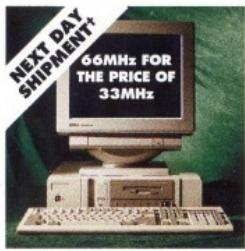
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A collection of 45 Windows tips for Windows veterans and novices

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The cost of scanners is now at an affordable level for most corporate and SOHO users. We look at seventeen scanners to see what's available

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\$500,000

in prizes up for grabs

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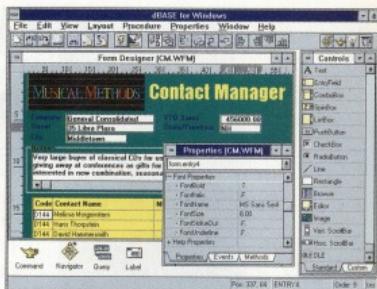
I see the light

COMPUSERVE

The C word

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dBase for Windows is fairly impressive in that it gives you GUI objects and still runs existing dBase III Plus and dBase IV code.

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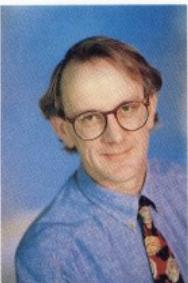


Intel's SX2 and DX2 OverDrive chips are available now, with Pentium and DX4 upgrade chips expected by the end of the year.

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September 1994**

- Pentium computers
- Accounting software
- Multimedia



Chicago removes barriers to ease of use

Information is circulating about the next version of Windows. We have known for some time that Chicago (the codename) is quite a radical upgrade from Windows 3.11, and it addresses many existing shortcomings.

From early briefings held in the US and from beta testers who are under limited embargos, we have gleaned sufficient information to put together a broad picture of the product before it is released (see the First Look in last month's issue, and Steve Gibson's Preview this month).

The Chicago picture is beginning to look pretty impressive: a multi-tasking 32-bit Windows with a redesigned interface that allows for nested folders and files (with long file names) to be on the desktop where the action is, instead of dividing tasks between a separate Program Manager and File Manager. These changes to the interface are long overdue.

According to beta test users, Windows users will be able to print in the background, send and receive messages via modem and fax, access a CD-ROM, and send and receive files across a network, *all at the same time*.

Hardware Plug and Play will hopefully remove many existing barriers to ease of use with a DOS/Windows PC. Drivers for add-on cards, SCSI, network cards and CD-ROM drives will already be installed as part of the operating system.

Communications has always been one of the weakest features of DOS/Windows. Chicago has an integrated communications system that looks after addresses for various e-mail destinations, as well as fax and modem links. This will remove the need for users to have several third-party comms applications on their system. The enhanced communications capabilities will appeal to many who use fax, modems and e-mail on a daily basis.

Microsoft has added drivers for NetWare, Unix, Windows NT Advanced Server and other networks, so the user no longer has to install them. Real-time remote access via modem or across a network is also included. Users will be able to connect to the Internet or other services, and send faxes using a new communications terminal program.

If you need to use DOS it will be available, but Windows will no longer require a separate DOS to be installed. CONFIG.SYS and AUTOEXEC.BAT files will be relegated a place in the museum of computer compromises.

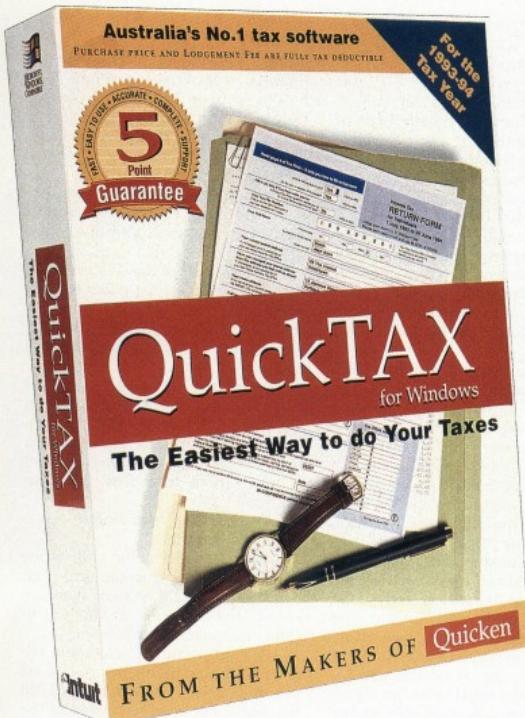
Of course the final make-up of the next Windows will not be known until Microsoft releases it onto the market, which is due to happen by the end of this year. Potential problems exist (some existing Windows applications may not be compatible) that could cause further delays.

Normally we wait until a product is finally released before we review it, but in the case of major operating system changes, you need as much information as you can get.

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Tricks of the PC trade



By Beverley Head

It costs around \$3,000. It has low margins (gross around 8-10 per cent). It demands a steep investment to sell and has a shelf life of around 8 months.

You'd have to be nuts to sell PCs — or very wise — well, a bit of both.

Right now in Australia there are more than 400 brands of personal computer on sale. Some are sold direct to corporate and government clients by the vendor. Others are sold over the telephone, through third-party value added resellers, via main street retailers, and from discount warehouses.

This year around a million will be flogged as the seemingly unstoppable wave of demand for personal computers rolls along.

The trick will be to sell them profitably. For some traditional high street retailers the lure of a new consumer electronics device has been immense. Some have come unstuck.

For example Brash Holdings which appointed a voluntary administrator in May found itself owing \$61 million to its bankers, and at least part of the blame has been laid with personal computers and office equipment — a market into which the company plunged two years ago.

The initial retail outlet for Apple computers, Brasher probably underestimated the cost of selling PCs.

Gerry Harvey, chairman of Harvey Norman, who is expanding a chain of computer superstores around Australia knows that it's a costly business.

Each of his stores has cost \$3 million to stock, and each demands staff who are techno-literate enough to sell the machines.

But he is starting to see some returns. Last year computer sales contributed \$60 million to the

group's \$450 million turnover. In the financial year to the end of June 1995 he's banking on \$200 million coming from computer sales.

In the upper retailing echelons, David Jones, which has completed a refurbishment of its flagship electronics outlet in Sydney, claims that computers are the fastest growth market in electrical and electronic goods.

At least part of the reason for the rush by retailers is the relatively low penetration of personal computers in consumer land, compared with other electronics items such as televisions and video players.

Currently 99 per cent of Australian homes have a television (58 per cent have two or more). Eighty one per cent of homes have a VCR (13 per cent have two or more) according to the Roy Morgan Research Centre.

Only one in four homes has a personal computer.

Added to that is the guilt factor which is starting to come into play. Not having a PC at home, if there are kids in the house, is tantamount to child abuse, according to some.

According to IDC Australia the home demand is on the rise. Last year the analyst claimed that 160,000 personal computers were sold to the consumer market. This year that is expected to rise by at least 25 per cent again — but even IDC adds the proviso that the demand from the home could go through the roof if it becomes the "must have" for the home in 1994.

It isn't just the retailers that want a slice of the action either.

Radio Rentals has announced plans to spend \$16 million this year

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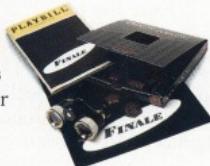


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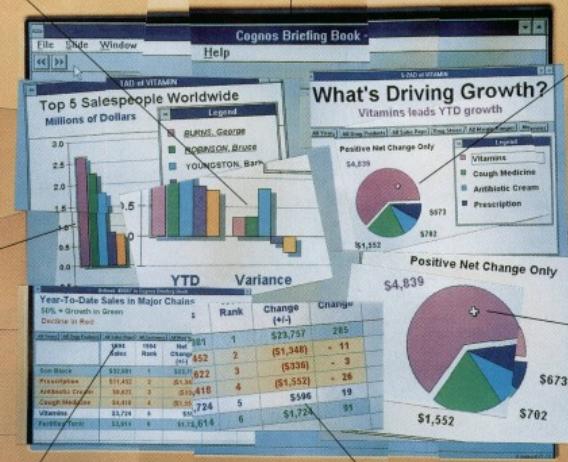
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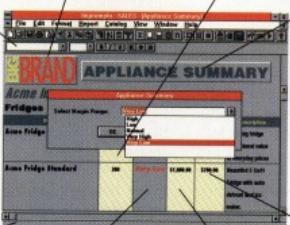
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INFOWORLD

Just like PC applications, PC sales techniques are diverse

From page 6

on personal computers from Packard Bell which it will then rent out from \$9 a month.

At this end of the market — retail and rental — the real god is volume.

With 8 to 10 per cent margins these outlets have to shift boxes. Service and support is offered, but the companies are also heavily reliant on the extended warranties which are offered by the vendors, and the user-pays model which the

software companies have implemented for software support.

The next echelon of sales are the value added suppliers which are becoming the boutiques of the personal computer industry.

The sales model here still demands volume — but not in the same order of magnitude as do mass merchandisers and high street retailers. These value added suppliers bundle in services which increase the value to the customer and hence their margin.

It is this line which resellers such

as Ferntree and Logical Solutions are following. In many cases consultancy is one of the services they are offering.

As business becomes aware that buying a PC which will be integrated with existing corporate applications is a complex task they are turning to specialists for networking plans, software licensing deals, and support packages.

Just like PC applications, PC sales techniques are diverse, and what is sensible for certain strata of the market is not so for another. Brash Holdings is still counting the cost of that lesson.

• **Beverley Head** is the information technology editor of the Australian Financial Review

AUSTRALIAN PC WORLD

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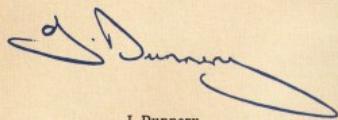
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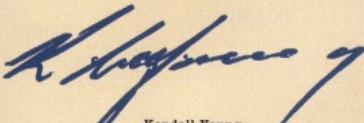
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By TONY SARNO

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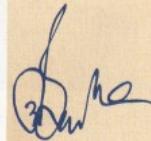
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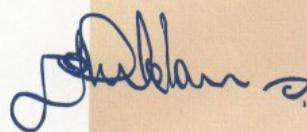
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Who'd have thought?



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In-house multimedia can be cost-effective



By Doug Ruttan

The world of personal computing is moving rapidly towards multimedia as the way to develop, present and deliver software and information. The pace of change won't be quite as fast as when we switched from 5½in to 3½in diskettes, but it will almost match it.

The reason for a slightly slower growth is that multimedia depends upon a new family of products that contains media forms from several previously unconnected sources, so all those links will have to be sorted out first. Nevertheless research from GISTICS Inc in the US shows that sales of multimedia software, services and related peripherals will grow from \$US350 million in 1993 to \$US3.6 billion by 1996.

Demand for multimedia will come from the three main market segments of business, education and home. However, it may turn out that business will fall behind the education and home segments because the more specific needs of the office user will have to be designed and developed from scratch.

This is in contrast to the wealth of existing entertainment and reference material available now for easy conversion to CD. The successful Microsoft Encarta encyclopedia is such an example.

Apparently two things have emerged as the main delaying factors resulting in the lack of multimedia titles to date. These being problems with copyright assignment and licensing of content, together with a lack of strong multimedia skills and tools.

Multimedia production needs skills and tools which will use the media to its full potential, and not just provide colour graphics screens with sound. This applies especially

for the Windows platform where authoring languages and video tools are very immature, with clear standards yet to emerge.

As a result I would like to suggest that if you are an organisation with over 50 people and have a current product, service or staff training need then why not consider producing your own multimedia applications? You might object to this — why should you be developing multimedia titles when the industry has not got its act together and how could you possibly hope to succeed?

Well, the research shows that multimedia developers working in-house do not suffer from the main problems facing commercial title developers. For example there are no issues of content copyright to worry about. Also, since your audience consists of your own staff or customers, and you know exactly what facilities or functions they need, the risk of ending up with a "title turkey" is virtually non-existent.

How do you justify the cost of multimedia application production? Surprisingly it seems to be within the financial reach of most organisations where multimedia comes into its own as a powerful one-to-many communications tool. Projects which are ideal candidates are usually in the corporate communications and training area where the costs of poor communications are high.

The ability to share costs and resources across projects and different departments should also help to keep investment under control, especially with ongoing applications where you can take advantage of your initial setup costs.

Continued page 20 ▶

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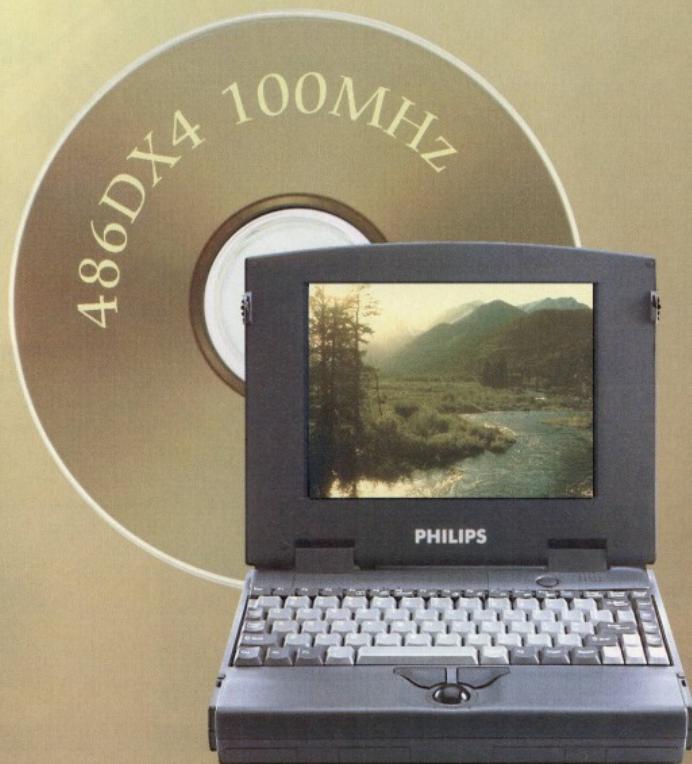
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The MediaNote offers the only true MultiMedia solution in a notebook computer. Because it has its own built-in speakers and microphone and true Sound Blaster compatibility, the MediaNote is unique in that it can record, compress, store to disk and playback voice, sound and music, and handle all of today's MultiMedia and voice recognition software.

Philips is aware that the ability to upgrade equipment is crucial in ensuring long term value for money and customer satisfaction. That's why the MediaNote is completely modular and upgradable, ensuring that technology will never pass it by and that the original investment is always secure. As needs change or technology advances it is very simple to upgrade the display screen, system memory, hard disk drive, processor, or batteries, or simply plug in the latest Type IV PCMCIA card. There is even the option of upgrading to a 128Kb second level SRAM cache thereby increasing performance by as much as 80%.

The hard disk drive is, of course, removable. This provides security, portability and flexibility in that it allows multiple users with different hard disks to access the MediaNote.

As the MediaNote is designed to use the Intel 486DX4-100MHz processor it is the fastest and most powerful notebook on the market. A staggering 1,200% improvement in graphic performance is achieved through the MediaNote's 1 Mb VESA Local Bus Windows Accelerator. Thus, MediaNote's performance can truly be compared with high end Pentium based systems.

Incorporated into the MediaNote is the latest Type IV PCMCIA expansion slot which allows the simultaneous use of a removable Type III PCMCIA 10.5mm hard disk drive and any one Type II peripheral :- fax/modem card, LAN adapter, SCSI adapter, or additional memory card. Those notebooks fitted with earlier PCMCIA slots provide only an either/or capability.

In keeping with many of its other design features the MediaNote is unique in its ability to operate on twin 33 watt NiCad or Ni-MH batteries. This provides a much longer operating time without sacrificing the floppy disk drive or any other peripheral.

Philips, fully aware of the importance of ergonomic design, has integrated the 25mm trackball, the largest in the industry, into a large centrally mounted palm rest so that it is equally convenient and comfortable for right or left handed users.

MediaNote's optional VESA Local Bus docking station with 5 1/4" and 3 1/2" drive bays has a fully built in stereo system. This allows the use of all "desktop" peripherals such as floppy disk drives, CD-ROM drives, tape systems, optical drives and easy connection to printers, scanners and networks.

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Microsoft, Lotus face suite dilemma



By Stewart Alsop

What is a productivity application any more, anyway? At Comdex, Lotus Development was pitching hard on how its suite of applications, SmartSuite — including 1-2-3, Ami Pro, Freelance Graphics, and Approach — was better than Microsoft's Office because of the way it worked with Lotus Notes. That pitch raises interesting strategic questions for both Lotus and Microsoft (and presumably Novell, eventually).

Both companies are struggling with whether their suites are one product or a collection of products. As the concept of the suite has taken hold and become more important to customers and therefore to the vendors, the vendors have made the design of the suite itself (how the individual applications work together and how similar their interfaces are) a separate objective from the design of the individual applications.

At first, that meant a kind of side project for a group of developers. Now it means a development team as big as the teams working on the individual products.

If the trend continues, the individual applications will become sideshows, driven by the needs of the integrated whole. And that is a scary prospect. These were the applications that drove millions of people to beg, borrow or steal personal computers. (Yes, I know we all like to sit around and pat ourselves on the back about how important business-critical applications are. But we must admit the truth: productivity was the driving application that allowed us to acquire and build the systems on which we're building client/server applications.)

If the mainstream desktop pro-

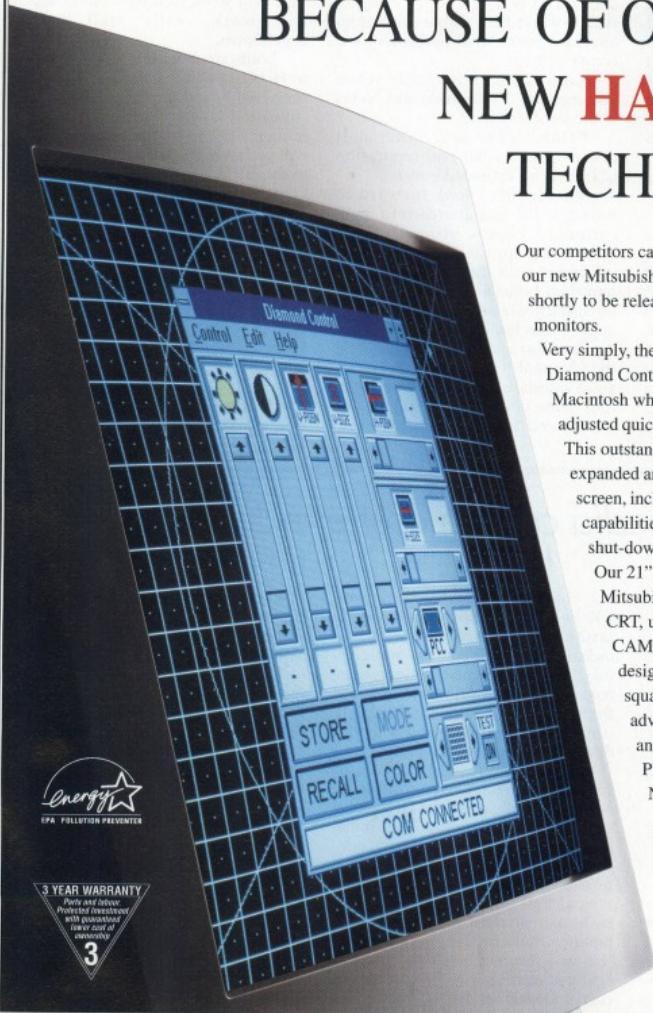
ductivity applications become sideshows and the key functionality of the desktop operating system is already pretty well defined, what will drive the personal computer to new heights? Are we stuck with the idea of applications as gigantic, feature-laden buckets of code? How will we get to having a truly document-oriented approach to computing?

Most scary of all, in my mind, though, is the question of where the boundary exists between the application suite and the system. Everybody knows that Microsoft makes both the operating system and a suite of applications that work on that operating system (not to mention the tools to write the applications, as well as a bunch of other pieces of an entire system). But Lotus has clearly decided that the only way it can remain competitive over the long term is to make Notes as important to companies as an operating system. So it is working hard on making SmartSuite and Notes into a system, just as Microsoft is working hard on making Chicago and Office into a system.

Lotus has already implemented something it calls Field Exchange, which allows its individual applications to act as a form for Notes. In other words, you can define a field in 1-2-3 and the contents will be synchronised with a field in Notes. This is cool because, in companies that have made a widespread commitment to Notes, not every user actually has to use the Notes client. Only those who are using it intensely for data sharing or co-operation need to learn about views and replication.

This looks like a pretty good strategy that Lotus has put together. First of all — for what appears to be the first time in its history — ▷

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Microsoft, Lotus face suite dilemma

From page 18

Microsoft has promised to support another company's programming interface without extracting blood from the other company. Microsoft has promised to support Notes Field Exchange in its applications, the first of which will be available in the next month or so. Lotus didn't have to pay Microsoft to do that, and Microsoft readily admits that Lotus Notes has become an issue for a significant number of its customers.

More important, Microsoft does not yet have a response to Lotus Notes itself. It demonstrated Chicago recently and finally showed what its competitive response to Notes will be: messaging and replication integrated with the desktop itself, contained in a system called Touchdown. But Touchdown won't be delivered until next year. (While it doesn't require Chicago, it's the kind of thing you wouldn't really want to

implement unless you had already decided to widely adopt Chicago.) And it won't be a viable solution to anyone's operational problems for a couple of years.

Lotus gets pretty huffy when you mention Touchdown and Notes in the same sentence.

"Hah," they say, "Microsoft doesn't know what real replication is! It isn't just extended e-mail."

Personally, I look forward to having a different approach to replication to choose from. I think Microsoft's approach will be better integrated with the overall user system than Lotus's and will therefore be easier to use and easier to develop applications for.

So now we're moving beyond the idea that individual applications are a sideshow to the suite and getting to the point that the suite is just a front end for the workgroup sys-

tem underneath. Microsoft says its suite will work well with Notes and will work really well with Touchdown.

Lotus counters that its suite will work better with Notes in the future, presumably as OLE 2.0 is added to Notes and Lotus's other applications in their next major releases. OLE 2.0 will probably work equally well with both suites, so there's a hint that Lotus will actually take a trick out of Microsoft's book and do things between Notes and SmartSuite that Microsoft can't do.

The bottom line: will you buy SmartSuite — instead of Microsoft Office — to get that extra Notes integration, even if you don't own any Lotus applications today? Lotus certainly hopes the answer is yes.

• *Stewart Alsop is the editor in chief of InfoWorld in the US*

In-house multimedia can be cost-effective

From page 14

The exciting news for us in Australia is that we already have our share of capable multimedia organisations

The main cost element for you will be to decide how much presentation technology you wish to include with your content, recognising that sophisticated presentations require more data conditioning and therefore take longer to complete (this is one of the in-house developer's main cost/success factors).

Initially you will have to outsource for specialised multimedia skills. As in all successful IT projects, detailed project definition and initial cost justification is important.

As an example, GISTICS' initial research showed that by the beginning of 1994 there were 2,000 to 3,000 in-house developers in the USA building multimedia applications and this was forecast to grow by 35 per cent per year. They had measured the cost of \$46,000 for developing the first

title in these organisations with a time frame of between 7-9 months. This was expected to improve significantly as these figures were for the first title and savings would occur with subsequent titles. I am sure you will agree that even these numbers are encouraging and certainly within the reach of many companies.

The exciting news for us in Australia is that we already have our share of capable multimedia organisations that can assist you. Apple, Microsoft, Aldus and Autodesk are just a few of the vendors that can supply the names of multimedia developers in your region — so why not examine the potential?

• *Doug Ruttan was general manager of WordPerfect Pacific's operations in Australia*

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Who's to blame for bloated software?



By Ed Foster

This month I want to discuss a letter from Mr Myles Swift, who offers an intriguing theory for the spread of what he calls "bloatware".

Swift is himself a software developer. In fact, he's president of Computer Assistance, a software company that sells a package called Garage Keeper for automotive repair shops. Swift has been in this business since 1977, and he's seen a lot of competition move into his market niche over the years. But recently, it seems the competition is often making the products worse instead of better.

For example, Swift now finds himself more or less compelled to come out with a Windows version of his product. "Our product is designed to run a repair shop's business — it's an application they boot up in the morning and stay in all day," he explains. "Most of them aren't going to need Windows because they don't really need the multitasking between applications.

But at a certain point, you have to do things because of public perception. You have to have a Windows version, whether the customers really need it or not, because that's on the checklist."

It's the checklists that produce bloatware. "On our top-of-the-line product, we'd estimate that only 10 per cent of our customers use more than 20 per cent of the features," Swift says. "Those features are in there because they were things our customers said they had to have. People have four pages of checklist items that might be nice to have, but nobody's going to have time to use all those features."

Swift thinks his top-of-the-line product is solid, but he still encourages customers to buy his middle-range offering and upgrade only if they really need to. Not all of his competitors have the same philosophy. "We'll see a three-person shop where you know that at least two of the guys are always out on the garage floor, and yet they've been told they have to have a network of Unix boxes," Swift says. "They've been surviving without any computers at all, and somebody's convinced them they can't run their business on a PC."

The real problem comes when software developers try to shoehorn in some cutting edge features late in the development process. "It's always a balancing act when you've been debugging and testing a product for six months, and then you have to decide if you're going to throw in these questionable features people are suddenly asking for," Swift says.

Swift believes bloatware is a direct result of software companies run by business-school types who

don't understand how the software is used in real life. "They see you have a market they want to go after, so they come in not really knowing the industry."

For example, most of Swift's customers now list the ability to do SQL queries as important. That sounds reasonable until you ponder how many car repair shops have a back-end database they need to access with SQL. "There's no value for most of our customers in features like that," Swift says. "And you know that those things are there just because some editor says that they should be."

The one part of Swift's bloatware theory that I don't think I buy is the part about the business-school types. I suspect that they're more a symptom rather than a root cause of the problem, because they couldn't force a competitor like Swift to put SQL queries in his program if the customers didn't fall for it. In other words, it's our fault if we as software buyers make bloatware a winning strategy for the vendor.

Oh, yes, there's also Swift's remark about editors. Now, I could get defensive about this and point out how computer magazines go much deeper than this. Frankly, though, letting you know about the latest bells and whistles is a crucial part of our role, and we're not going to stop.

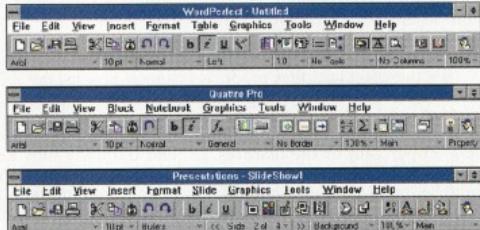
But perhaps you as a software buyer have to give more thought to which bells and whistles you really need in your business. However much the vendors or the editors talk up other features, it's really just so much noise for you.

• Ed Foster is editor of InfoWorld in the US

Create your own suite

Novell and its newly acquired application company, WordPerfect, have unveiled their first jointly developed product. Called PerfectOffice, it gives users the opportunity to build their own suite, and is the first application suite with built-in networking tools.

PerfectFit technology ensures a common user interface for each PerfectOffice program



It will be available in three packages: PerfectOffice Standard, Professional, and Select.

The Perfect Office Standard version will include Object Linking and Embedding (OLE) 2.0-compliant versions of WordPerfect, Quattro Pro, WordPerfect Presentations, the InfoCentral personal information manager, and Envoy, a workgroup publishing tool. It will also include a client for WordPerfect's Symmetry electronic-mail package, formerly called WordPerfect Office.

The PerfectOffice Professional package will contain all of the products in the Standard version as well as an OLE 2.0-compliant version of Borland's Paradox database and Novell's Visual AppBuilder, which is a fifth-generation macro scripting tool.

PerfectOffice Select is a CD-ROM-based package that will let users create their own suite. It includes all of the products in the Professional version as well as WordPerfect workgroup applications; a selection of consumer products from WordPerfect Main Street; and a selection of third-party products.

According to WordPerfect, the

Select suite will not lock users into one vendor, and will let them pick and choose the applications they want.

The Select CD will contain 30 applications. According to WordPerfect, "Approximately 12-14 will be from WordPerfect, and the

rest will be third-party products."

The CD will let users test drive software they may be interested in. A crippled version of programs can be loaded into the user's hard disk for evaluation, for an unspecified period of time.

After users choose the software they want in their suite, they will phone and request the applications they want to order. They will then be given access numbers to install the suite. Users will also receive a registration number to obtain support and special offer upgrades.

WordPerfect also said users would be able to purchase core products and add to them at a later date.

The cost of products added to the suite at a later date will be calculated as though they were all purchased together at the one time.

WordPerfect was not able to give a time period for users adding products to the suite.

Third-party vendors

The PerfectFit Partners program has also been announced. It enables third-party vendors to integrate their applications with the PerfectOffice suite. WordPerfect said 70 developers

have joined the program. PerfectFit technology is a common code base shared by all the suite components and provides integration for each of the PerfectOffice components. It includes a consistent user interface and common tools.

On the networking front, all PerfectOffice applications support the following Novell NetWare-based services: a File Open dialogue box, which allows users to select and attach to different NetWare servers and map network drives without exiting; Novell's NetWare Navigator; and WordPerfect Envoy, a workgroup publishing tool.

A WordPerfect spokesman said these features are a first step toward a much broader integration of the companies' products, particularly on the workgroup, document management and messaging fronts. Novell and WordPerfect are working to make NetWare services such as imaging and telephony available on the desktop through WordPerfect applications, he added.

PerfectOffice highlights include the following:

- **PerfectLinks:** Technology that allows a PerfectOffice customer to plug competing applications into the suite. For example, a Lotus 1-2-3 customer could plug that spreadsheet into PerfectOffice, and the program would be automatically integrated into the suite.
- **Macro and scripting tools:** Like Microsoft's Visual Basic Application Edition tool in its Office 4.x suite, the Novell/WordPerfect suite includes PerfectScript for developing macros of scripts across programs. Novell's Visual AppBuilder in PerfectOffice Professional lets developers create application loadable modules without writing code.
- **PerfectSense:** Based on linguistic technology, this feature performs intelligent search and replace. When replacing a word in text, the word is replaced in the appropriate tense.

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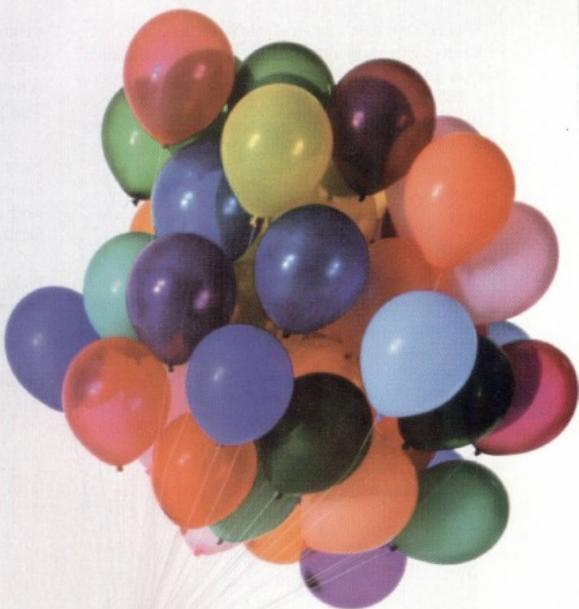


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IBM revamps OS/2

While Microsoft continues to beat its marketing drum for Windows 4.0, IBM's Personal Software Products group is squeezing several new features into the next couple of versions of OS/2 to bolster the product's market position.

In the next beta version of OS/2 for Windows, code-named Warp, the company will include a "dashboard" feature and three-dimensional icons that make it easier for users to tap into the full extent of the operating system's most powerful capabilities, according to developers who were briefed.

The company apparently will not stop there. In another version expected by the first half of next year, IBM plans to dramatically revamp the look and feel of OS/2's graphical Workplace Shell to better compete against the proposed document-centric interface that Microsoft plans for Windows 4.0 (also known as Chicago), a source within the

company said. No details were available.

However, IBM reportedly has contracted out some of this interface work to a small developer that specialises in designing graphical interfaces, the source said.

While many OS/2 users seem content with the look and feel of the Workplace Shell, some said many aspects could use some improvement.

Another feature IBM plans to include in Warp is a program that allows users to quickly access the information highway. This is in response to a similar capability, code-named Marvel, in Windows 4.0.

Marvel is a subscription service that gives users easy access to a range of on-line services.

Warp will also include an installation procedure with more diagnostics information about hardware and software configurations.

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Type of Business

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Disk Size 3.5 5.25 3.5

Areas of Interest (please tick)

- | | |
|---|--|
| <input type="checkbox"/> CashBook | <input type="checkbox"/> Cash Register |
| <input type="checkbox"/> General Ledger | <input type="checkbox"/> Products |
| <input type="checkbox"/> Suppliers | <input type="checkbox"/> Invoicing |
| <input type="checkbox"/> Payroll | <input type="checkbox"/> Customers |
| <input type="checkbox"/> Report Writer | <input type="checkbox"/> Multi User |
| <input type="checkbox"/> Other | |

At work with Microsoft

Microsoft's At Work operating system promises many features for users as the hardware and software become available during the next few years.

Users will receive notification of paper jams or shortages right at the PC, rather than discover the problem in the printer room after sending a file to print.

In fact, with Lexmark International's WinWriter 600, the first At Work-enabled printer, users can check the print queue to identify jobs already waiting and perform a number of other common tasks.

At Work will also enable users to send a document to a fax machine on

the network and send to another user several hundred kilometres away, allowing the recipient to print the document with the original quality or edit it.

However, At Work-enabled fax machines will not arrive until later this year at the earliest.

Other features of At Work include the planned capability to merge voice- and electronic-mail on the PC.

This will require not only phone management software for the PC but also Windows 4.0 and add-on software for phone systems. It will also require phones with built-in At Work support. ■

Compiled by Monique Haylen

HARDWARE

Modular notebook

ZENITH Data Systems has introduced a notebook family that features five user-configurable components, including the CPU. Called the Z-Noteflex, the systems feature a range of microprocessors including the Intel DX4, local bus technology, and multimedia capabilities.



The Z-Noteflex includes a built-in 16-bit sound system and offers the ability to add a self-contained CD-ROM and amplified stereo audio enhancement

Multimedia features include a built-in 16-bit sound system and the ability to add a self-contained CD-ROM and amplified stereo audio enhancement.

The Z-Noteflex ships as standard with a 3½in 1.44Mb floppy drive, upgradable FLASH BIOS, two type II

PCMCIA slots, one serial port, one EPP/ECP enhanced parallel port, an external video port, and a PS/2 mouse/keyboard/keypad port.

The notebook also offers 1Mb of video RAM, an 82-key keyboard, a trackball that is located under the keyboard, and an LCD status panel that uses 14 icons to give the user a visual reminder of the notebook's operating state.

The Z-Noteflex provides two-level password protection, a modular component lock-down kit, and Premier System Management. It offers power modes including Standby, Rest and Lid Rest. The system provides 2-4 hours battery life on colour-based systems and 3-6 hours on monochrome models. The battery can be fast charged in two hours when the system is off.

The colour system weighs 2.9kg and the mono model 2.6kg, both with battery.

The Z-Noteflex comes preinstalled with MS-DOS, Windows for Workgroups, Microsoft Sound System 2.0, PCMCIA card and socket services, and an Indeo Video software greeting.

Prices start at \$5,710 for an i486SX 33MHz-based modem with a 10.4in monochrome LCD, 200Mb IDE hard drive and 4Mb RAM. All models ship with a three-year warranty.

Z-Express
Phone: (02) 417 1522

Technical Desktop machines

INTERGRAPH has added three personal workstations to its Technical Desktop (TD) range of Intel-based machines: the TD-3, TD-4, and TD-5.

The TD-3 is a single-processor desktop system with a 90MHz Pentium, the TD-4 is a desktop system with dual 90MHz Pentium processors, and the TD-5 is a desktop system with dual 90MHz Pentium processors. The machines are designed and configured to run high-end, graphics-intensive applications.

The TD-3 is configured with a Weitek P9000-based G90 graphics accelerator and 2Mb VRAM. The TD-4 and TD-5 are configured with Weitek's P9100-based G91 graphics processor and 4Mb of VRAM.

Multitasking features enable dual-Pentium TD-4 and TD-5 systems to run processor-intensive applications on one processor while a second processor runs other applications.

Intergraph Australia
Phone: (02) 888 9900

TOP OF THE NEWS

Patent dispute settled

Microsoft and Stac Electronics have announced they have signed a broad cross-licence agreement to end their disk compression patent dispute. The agreement includes an equity investment in Stac by Microsoft to provide a framework for future co-operation between the companies. Under the agreement, Microsoft and Stac will cross-licence all of their existing disk compression patents, as well as any future disk compression patents that either company receives over the next five years.

Stac will receive a licence for Microsoft's preload technology in MS-DOS 6 and Microsoft will receive the right to licence, for a royalty, all of Stac's existing patents unrelated to disk compression, as well as any new patents that Stac receives over the next five years.

Aero bundles

Compaq has announced that it is bundling its Contura Aero with a PCMCIA external floppy drive and a mobile port expander with the Contura Aero.

The mobile port expander is pocket-sized and offers three expansion slots: VGA, keyboard and mouse port. Compaq has also pre-installed WinLink software.

The bundle is shipping with the four Aero models. Prices start at \$2,749 for the Contura Aero 4/25 M84 (mono).

Lotus acquires Soft-Switch

Lotus has announced it has signed a definitive merger agreement to acquire Soft-Switch, a provider of electronic mail message switches that link disparate electronic messaging systems for businesses. Lotus said it will acquire Soft-Switch for approximately 1.3 million shares of Lotus common stock and account for the transaction as a pooling of interests.

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ADELAIDE:	Unit 6, 4-6 Coglin St, Brompton SA 5007	Ph: (08) 346 0599	Fax: (08) 346 0588
PERTH:	6 Rowe Ave, Rivervale WA 6103	Ph: (09) 472 1877	Fax: (09) 472 1878
NEW ZEALAND:	Unit 7, Basilton Park, 97 Mt Eden Rd, Auckland NZ	Ph: (64) 9 358 1108	Fax: (64) 9 358 4238

ToughWriter from Dataproducts

DATAPRODUCTS has announced an enhanced version of the Dataproducts 8524 high-performance matrix printer.

Called the "ToughWriter" it is designed for high-volume printing applications — up to 15,000 pages per month. Features include graphics resolution up to 360dpi, 10 resident

fonts, 13 resident barcode symbologies, compressed print up to 24cpi, programmable vertical spacing in 1/360in steps and six print speed/quality combinations up to 780cps.

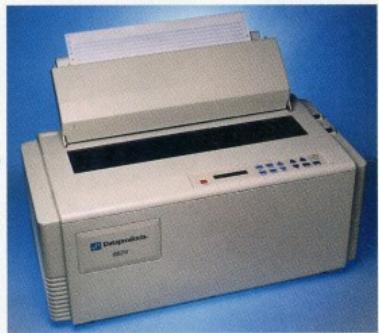
Paper-handling features include the ability to print on up to 100gsm stock and up to 9-part forms. Continuous forms up to 16in wide are supported as well as cut sheets in A4, A3, B4, B5, letter and legal sizes. It also offers zero tear-off, paper park, autoload, autoscroll and label print mode.

Options include pull tractors, a single-bin cut sheet feeder, RS-422-A interface and a paper stacking shelf.

The Dataproducts 8524 sells for approximately \$3,200.

Dataproducts
Phone: (02) 451 3533

*The Dataproducts
ToughWriter is an enhanced
version of the 8524*



Removable hard drive

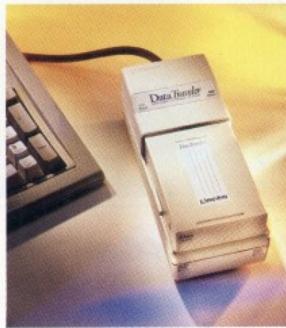
KINGSTON Technology has released Data Traveler DT200EX, an external, high-capacity, removable disk storage upgrade system. Designed to provide users with additional disk capacity, it plugs into the parallel printer port of a PC.

It is available in 127Mb or 209Mb capacities and features "pass through" printer connection for printing while Data Traveler is in use. It offers a battery life of up to three hours, measures 18cm by 13cm, and weighs under 1.5kg with battery.

The Data Traveler DT200EX features QuickSwap software enabling it to self-configure when it is inserted into the receiving frame. The package includes a Data Traveler base, Data Traveler battery, Data Traveler parallel-to-IDE adaptor, Data Carrier, carrying case, Carrier labels, AC adaptor, utility disk and installation manual.

Data Traveler sells for \$1,355 for the 127Mb version and \$1,578 for the 209Mb version.

Kingston Technology
Phone: (03) 690 9699



*The Data Traveler is an external
removable hard drive*

TOP OF THE NEWS

Access problems

Microsoft's Access 2.0 database appears to be causing corruption problems for certain users, according to a handful of developers who posted comments on CompuServe over the past month, and interviews with other users. Microsoft officials said most of Access's 1.5 million users are not experiencing these difficulties. But those who are having the problems said they occur randomly. The result is that frequently accessed data becomes corrupted or lost.

Also irritating to some is the fact that Access does not notify end-users when data corruption has occurred. In those cases, users continue to enter data without knowing it has been corrupted. That work is then lost or rendered useless. End-users and systems professionals said they are not made aware of the problem until the database administrator performs a check on the database and finds it has been corrupted. Microsoft officials said anyone with Access problems should notify Microsoft support staff immediately.

IBM to compete with cc:Mail

IBM is about to launch a solo flight into the crowded client/server messaging market, and its first move will be to stop marketing Lotus's cc:Mail.

A part of a broader groupware strategy, IBM said it will conduct a major overhaul of its recently introduced UltiMail messaging client software and AnyMail server software.

The as-yet-unnamed product duo is meant to address user needs for robust, scalable client/server messaging systems. It is also intended to tap IBM's experience in providing enterprise services and offer a migration path for current IBM host-based Professional Office System and OfficeVision customers.

In addition, the server — which will run on OS/2 or AS/400 hardware and store messages and directory information

ACRES OF SPACE IN LESS THAN A SQUARE FOOT

Sony elevates 4mm Digital Data Storage (DDS) technology to a higher level of capacity and throughput with the introduction of its new DDS-2 Tape Drive.

The SDT 5000 is the first DDS Drive to meet the advanced second generation (DDS-2) standards, offering 100% more storage capacity.

Backward compatibility is provided, ensuring current media recorded in the DDS format can also be read on these new second generation drives.

Sony offers an extensive range in internal and external models to choose from.

With up to 16.0 GB of storage capacity (with data compression) on a 120 metre tape and a double sustained data transfer rate of 366 KB/second using new generation LSI's, Sony's DDS Drive technology sets the industry standard once again.

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Notebook family grows

TOSHIBA has expanded its product range with the introduction of the T2400C series and the T3600CT ultra-portable.

Placed between the T1900 Value notebooks and the T4700/T4800 Performance notebooks, the T2400C series is based on a 50MHz i486DX2 processor.

It includes a local bus video and graphics accelerator, a choice of high-resolution 256-colour screens (a dual scan passive matrix on the T2400CS units and an active matrix Thin Film Transistor screen on the T2400CT), and 250Mb or 320Mb hard drives. It also has room for an internal sound card.

The T2400CS ships with 4Mb RAM, expandable to 20Mb, and the T2400CT offers 8Mb RAM, expandable to 24Mb.

Both offer separate 5mm and 14.5mm PCMCIA slots, feature a redesigned keyboard with an integrated AccuPoint pointing device, and offer simultaneous display and SVGA video-out features.

The 2400C series is multimedia-enabled and options include a sound card, external microphone, speaker headphone, microphone jacks and volume control.

The T3600CT is aimed at the corporate user and is based on a 50MHz i486DX2 processor.

It offers a 250Mb hard drive,

8Mb RAM, expandable to 24Mb, an 8.4in active matrix TFT colour screen and up to six hours battery life.

It offers a Type II PCMCIA slot and features an integrated AccuPoint pointing device on the keyboard.

The system comes preinstalled with Windows for Workgroups 3.11, MS-DOS 6.2 and Card Manager which eliminates the need for individual drivers for PCMCIA devices.

The T3600CT measures 251mm by 46mm by 210mm and weighs around 2kg. It sells for \$9,084.

Toshiba ISD

Phone: 008 021 100

1Gb hard drive

IBM has added a 2.5cm high, 3/8in 1Gb AT hard disk drive to its product line of AT-attached hard disk drives.

Aimed at high-end, data-intensive desktop applications, it offers a three-year warranty, 800,000 hours mean-time failures, 5,400 revolutions per minute and 8.5 millisecond average seek time.

The disk drive includes IBM's second-generation magnetoresistive (MR) head technology.

It allows disk drives to pack data

more tightly together. The disk drive can also operate in duplex mode, which enables downward compatibility with existing AT (IDE) BIOS systems, making the drive appear as two 500Mb drives.

This allows users with systems using back level BIOS to achieve storage capacities beyond the 528Mb AT (IDE) limitation.

The IBM 3/8in 1Gb hard disk drive sells for \$2,427.

IBM Direct

Phone: 1 800 815 514

TOP OF THE NEWS

in DB2 databases — may especially appeal to AS/400 customers who have been notably neglected by leading LAN messaging vendors such as Lotus and Microsoft, analysts said.

IBM began promoting cc:Mail as a key part of its PC LAN strategy, after its own OfficeVision LAN strategy failed.

With its messaging strategy in place, IBM will directly compete with cc:Mail and will halt its 5-year-old policy of actively marketing cc:Mail systems. However, IBM will continue to resell Lotus Notes and its OS/2 SmartSuite, which includes a cc:Mail client.

Lotus denied there was any shift in the IBM policy toward cc:Mail. It said it expects IBM to continue to resell cc:Mail, including desktop and back-end software, as well as Notes and SmartSuite.

Computervision markets OZ software

Following the signing of an FTA agreement with the Federal Government to develop export opportunities, Computervision has announced an agreement to provide worldwide marketing and distribution for UCIS. The package, Utilities Customer Information System (UCIS), is an Australian-designed software package for the utilities industry. Developed by Allgas, the suite is modular and includes customer accounts, site tables, billing systems, as well as support systems, hardware and software inventory, personnel and training.

International fax modem

INTEL has announced a PCMCIA fax modem certified for international use with mobile computers. Called the Intel International Faxmodem, it allows international travellers to use a single fax modem when travelling in the approved countries. It operates at 14,400bit/sec fax and data modem speeds. Other standard features include: a Hot Swap capability, allowing users to insert or

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Notebook trio

PACKARD Bell has moved into the notebook market with the release of three notebook computers: the Statesman Monochrome, Statesman Colour, and the Diplomat. The Statesman is a 33MHz 486SLC-based



The Statesman weighs 2.7kg and is available with a mono or colour screen

notebook that weighs 2.7kg. Two models are available: a 64 shade monochrome display or 256 colour LCD display.

It ships as standard with 4Mb RAM, upgradable to 12Mb, and a 200Mb hard drive.

The Diplomat is based on an Intel i486SL processor and includes 4Mb RAM, upgradable to 20Mb, and a 170Mb hard drive. It offers a 22cm backlit monochrome LCD display; a front mounted, detachable, two-button trackball; and a Type II PCMCIA slot.

The notebooks ship with Microsoft Works for Windows, MS Money, MS Productivity Pack and an eight-game Microsoft entertainment pack. The Diplomat also ships with MS-DOS 6 pre-installed.

The Statesman Monochrome sells for \$3,495, the Statesman Colour for \$4,995 and the Diplomat for \$4,795.

Packard Bell Australia

Phone: (02) 317 4366

Ascentia notebook

AST Computer has announced the Ascentia 900N notebook computer. It replaces the PowerExec and is based on either a 75MHz Intel DX4 or 50MHz DX2 processor.

It ships as standard with a 10.3in Dual-Scan STN colour display. The 900N features a pan mode that enables 1,024 by 768 images to be displayed in a 640 by 480 window.

In addition to DOS and Windows, the Ascentia 900N comes pre-loaded with Lotus Organizer, a personal information manager; ConnectSoft's E-Mail Connection, an e-mail interface that simultaneously routes information to multiple public e-mail systems and LAN-based networks; Delrina WinFax Lite and COMit Lite, programs that make it easy for users to send, receive, and manage faxes or data files from the notebook; Traveling Software's LapLink remote access; and Star Software B-Tools.

B-Tools is a Windows utility that provides a range of spreadsheet and word processing templates, a business plan outline generator, financial calculator, and contact manager.

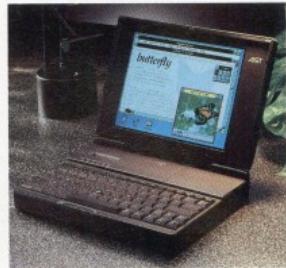
The system comes standard with 4Mb or 8Mb RAM, expandable to 32Mb, and a removable 340Mb hard drive.

It offers an integrated SmartPoint track stick, weighs 2.9kg, and offers up to eight hours battery life.

The Ascentia is covered by a three-year warranty. Prices are expected to start at \$6,000.

AST Research

Phone: (02) 415 5400



AST's Ascentia 900N

TOP OF THE NEWS

remove the card without having to exit an application or restart the system; Power Saver feature for drawing near zero power when the card is not in use; and Delrina WinFax LITE and Hilgraeve HyperACCESS Lite fax and communications applications.

It also ships with Switch-It software that lets users choose from a list of certified countries and the fax modem automatically configures to work with the selected countries local telephone systems. It is certified for use in Australia, United States, Canada, UK, Germany, France, Norway, Denmark, Sweden, Finland, the Netherlands, Singapore, Iceland and Poland. Other countries will also be included.

The Intel International Faxmodem for PCMCIA sells for \$699.

Ventura 5 delayed again

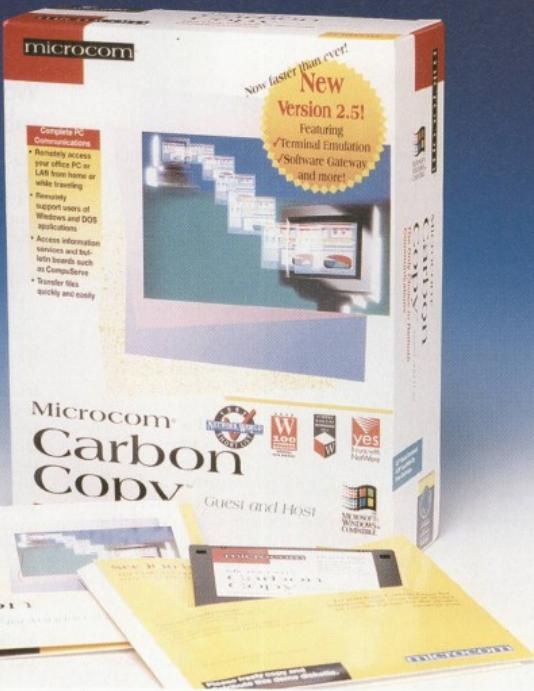
Corel's Ventura Publisher 5 has been delayed for the second time, now until mid-August, the company has confirmed. Users will be compensated with a bundled maintenance release for CorelDraw 5; the release fixes bugs that users describe as annoying but not as fatal as those in Version 4.0.

Ventura, the final piece of the CorelDraw 5 package, was expected to ship in late May, then June, and now mid-August. Users have criticised Corel's commitment to a yearly development cycle, saying they would prefer a clean, complete product to Corel rushing to meet self-imposed deadlines. Users believe those deadlines were partly to blame for the CorelDraw 5 bugs that will be fixed in the August maintenance release.

The bugs include problems rotating objects 90 degrees for users of PCs without maths co-processors (users can rotate an object 45 degrees twice for the same effect); PowerClips losing formatting or becoming corrupted; problems printing 96-point Type 1 fonts; and imported CorelDraw 4 text not automatically flowing from one frame to another.

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'Green' IDE drive

MICROPOLIS has announced the Taurus 4110A IDE drive. It is a low-profile 3½in IDE disk drive. It has 1.057Gb of storage and energy-saving features. It offers power consumption of 8.25 watts and features a built-in automatic power-down feature that reduces power consumption during inactivity.



IDE controller provides a high-speed data transfer rate of up to 10Mb per second. It has a Mean Time Between Failure of 500,000 hours and offers a five-year warranty. It sells for approximately \$1,500.

Micropolis Corporation
Phone: (02) 959 2298

CD network controller

NETSCRIBE 2000 is an Ethernet network controller that allows Kodak, Phillips or Yamaha CD-ROM mastering units to connect directly to a Novell network.

It resides on the network with its own Ethernet connection, allows users to attach to the Netscribe via the network then drag and drop files from Windows file manager, Mac or DOS and print them on CD-ROM.

Netscribe 2000 has multi-user

access capabilities and can accept multiple writes to a blank CD-ROM over any period of time, finishing the CD-ROM as a single or multisession CD-ROM. The Netscribe 2000 allows Windows, Macintosh or DOS users on a Novell network to archive directly to CD-ROM from any application.

It ships with a five-user client licence for Macintosh, DOS or Windows, and sells for approximately \$6,000.
NewTech Distribution
Phone: (075) 31 0700

Full Duplex Ethernet DNI cards

CABLETRON Systems has announced a family of Full Duplex Ethernet Desktop Network Interface (DNI) cards for ISA bus systems. The E2200 cards are available in three styles and can run Duplex 20Mbit/sec Ethernet or 10Mbit/sec standard Ethernet mode. Full Duplex mode allows users to upgrade to a higher performance level in order to meet the need for increased bandwidth or additional users.

Each E2200 card is Bus Mastered and designed. Bus Mastering means no memory needs to be allocated in the host system or the DNI card. Data is transferred in and out of the cards through the processor on the PC.

Cabletron
Phone: (02) 950 5900

Workgroup dye sublimation printer

TEKTRONIX has announced the Phaser 440, an A4-size dye sublimation colour printer for graphic arts, business and engineering/scientific applications.

Designed for users wanting output that resembles a photograph, it prints continuous-tone images and accommodates oversized media for full-bleed printing of A4-size page layouts.

It's enhanced architecture includes a fast print engine and built-in colour and image processing hardware. Full network support allows the printer to be shared across PC, Mac and Unix platforms.

The 2ppm printer ships with 16Mb memory, expandable to 64Mb, and incorporates Adobe PostScript Level 2.

The Phaser 440 offers features such as dual input trays and standard parallel, serial and AppleTalk ports. Ethernet is available for EtherTalk, Novell NetWare or TCP/IP protocols.

The Phaser 440 uses Tektronix's proprietary TekColor Photofine and Dynamic Correction image processing technologies for colour and image accuracy.

Photofine assures that text and lines print clearly, with clean and crisp edge definition. TekColor Dynamic Correction is built-in colour matching technology that improves colour accuracy and provides the ability to simulate colour produced on alternate colour output devices.

The Phaser 440 sells for \$15,620.

Tektronix
Phone: 008 81 1177



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The KTX Careta monitor specialises in environment protection via its low radiation MPRII standard and energy conscious Power Saver function.

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- Full frame, distortion-free image.
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- Microprocessor control panel with memory to store your screen settings. Plus, digital controls within easy reach for adjusting contrast, brightness, and horizontal/vertical frequencies etc.
- Extensive application with a range of hardware platforms, work station modes and video standards (from VGA to 1600 x 1280 ie. ask your dealer). Edge also carry a full range of 14" monitors. These include SVGA, Non Interlaced and Low Radiation. So invest in the environmentally friendly monitor with a KTX Careta from Edge Technology.



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SOFTWARE

Lotus upgrades

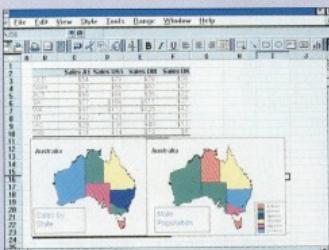
LOTUS Development has announced SmartSuite 3 for Windows, 1-2-3 Release 5 for Windows, and Ami Pro 3.1 for Windows.

SmartSuite 3.0 is a Notes-ready desktop suite that includes 1-2-3 Release 5, Lotus Approach 3.0, Ami Pro, Freelance Graphics, Organizer 1.1 and ScreenCam 1.1.

Each program in the suite takes advantage of Notes Field Exchange (Notes/FX) 1.1 — technology that allows data to be exchanged between desktop applications and Lotus Notes.

1-2-3 Release 5 for Windows is a major upgrade to the 1-2-3 spreadsheet. Designed to enhance both individual productivity and the productivity of people using electronic mail, it includes features such as SmartMasters and Assistants; Lotus Maps, that lets users show spreadsheet data in a map; enhanced database capabilities through integration with Approach; and messaging-based workgroup capabilities including Range Routing that make it easier for users to share spreadsheet information.

Additional enhancements include a fast format feature that lets users copy formats from one range to another; support for multiple currency formats; direct drag and fill; and printing enhancements which allows users to centre worksheets and lets them preview up to nine pages simultaneously. 1-2-3 Release 5 will ship with maps of Australia by State, as well as maps of the USA, Canada, Mexico, Europe, Japan, Taiwan, 1,500 cities of the world, and



With Lotus Maps you can show spreadsheet data in a map

the world by country. These maps will include geographic, demographic and commercial data.

1-2-3 Release 5 for Windows sells for \$735.

Ami Pro 3.1 for Windows supports Notes/FX 1.1 technology which, with Notes, provides a document tracking and management database for workgroups. It also includes a Document Sharing Application. It leverages Notes' replication, security, and notification services as well as its support for mobile access. Once created, all new

documents are stored in a Notes database, enabling all members of the workgroup to know exactly where the document is located and its status during the editing process. Once a document is posted, members of the workgroup can view, edit or create a new version of a document depending on the rights the original author has given to the workgroup.

Any member of the workgroup can create a new document by selecting one of the Ami Pro templates provided in the system.

Ami Pro 3.1 also offers a mail memo front end to Lotus cc:Mail and Lotus notes. This allows users to create, send and reply to mail memos using Ami Pro as the mail memo editor. Users can create a mail memo in Ami Pro and mail it directly from Ami Pro to cc:Mail and Notes users. Upgrades from previous versions of Ami Pro or crossgrades are available for \$195.

Lotus Development

Phone: (02) 350 7777

SOHO CDs

SOFTKEY has added eight CD-ROM titles to its consumer software portfolio. Aimed at the SOHO market the titles include clip art and photo libraries as well as CD versions of Windows applications.

The products include PC Paintbrush ClipArt Library for Windows/Mac, a collection of 3,000 full colour clip art images from the PC Paintbrush range. It is divided into 26 categories, including borders and frames, business, travel, sports, retail and recreation; Calendar Creator Plus for Windows, a calendar/diary keeping system; WindowWorks, an integrated package for Windows that includes word processing, spread-

sheet, database, communications, mailing labels, OLE and fax support; PhotoFinish for Windows, a image editor that offers 87 painting and retouching capabilities; and Key Fonts Pro for Windows/Mac, which includes over 1,200 scalable TrueType and PostScript compatible fonts.

Clover Distribution

Phone: (02) 488 9666

FormFlow 1.1

QUOIN Technology has announced a release of Delrina's FormFlow, workflow automation and electronic forms routing software. Called FormFlow 1.1 enhancements include Forms Data Interchange (FDI), an electronic document interchange

capability that enables users to route forms and data as binary information via fax; additional database connectivity to Lotus Notes and other databases through ODBC; and more seamless e-mail routing support for WordPerfect Office.

FormFlow 1.1 also includes direct support for Lotus Notes databases.

FormFlow consists of two components: Designers, to create forms applications; and Filler, so users can fill in and route forms via e-mail and fax.

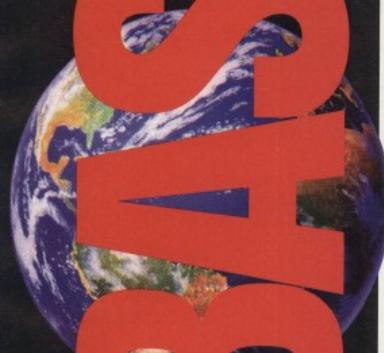
A starter kit is available for \$695. It includes FormFlow Designer, two FormFlow Fillers, a training video, and Crystal Reports 3.0. Single copies of FormFlow Filler sell for \$195.

Quoin

Phone: (03) 823 4421

FOR WINDOWS

dBASE



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■ **Client/server-ready**

■ **Open architecture**

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Fast start ... no limits

Now you can manage your data and create Windows database applications instantly using what you already know. New dBASE® for Windows has been built from the ground up to take your Windows application development efforts to unprecedented levels of ease, speed and open connectivity. Of course everything from the dBASE DOS world works here. Your knowledge, applications and data all move seamlessly to the Windows environment. But unmatched compatibility is just the beginning.

Object-oriented development made easy

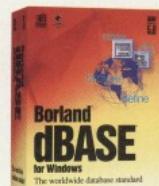
Objects are the key to application and client/server development under Windows. Only dBASE for Windows is built on a powerful, open, object-oriented architecture that makes it the fastest way to build Windows database applications. Advanced Plug-and-Play Architecture puts you in full, productive control of Windows, with open access to DLLs, Windows API, and custom controls. The NEW Two-Way-Tools™ let you work interchangeably between the visual tools and the source code for maximum flexibility and productivity. You work visually with the Graphical Query Designer and

FormExpert,™ and dBASE automatically creates reusable components instantly.

Client/server-ready when you are

With dBASE for Windows, you can create standalone applications that are completely scalable to a client/server environment. Your dBASE knowledge is all you need to use Oracle, Sybase, InterBase,® or a host of other database servers.

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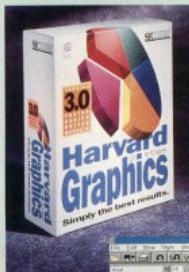
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Effective presentations

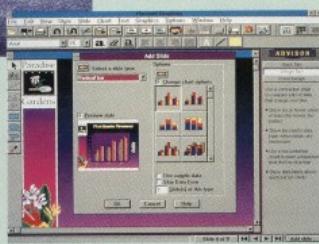
REMINDING users that they still have a presence in Australia, Software Publishing Corporation has released Harvard Graphics 3.0 for Windows, a major upgrade of their presentation graphics program.

It is designed for users wanting to create professional looking presentations quickly and easily, and those users who currently use programs such as word processors or spreadsheets to create visuals.

Features of the program include an Advisor Design Checker that interactively checks a user's presentation against design guidelines; Quick Advice; Advisor Quick and Design tips in more views; Quick



The Advisor Design tips in Harvard Graphics 3.0 offer design tips and advice



dBase 5.0 for Windows

BORLAND International (Australia) has announced dBase 5.0 for Windows. It provides end-users, power users and developers with a product for building Windows database applications and upsizing to client/server computing environments.

Features include two-way tools, an open plug-and-play architecture, object-oriented dBase extensions, a scalable Borland database engine, and other ease of use tools.

Two-Way Tools lets users work interchangeably between visual design surfaces and their dBase source code. It allows users to either edit the code directly or use the visual designer to make changes.

dBase for Windows ships with 20 predefined classes and allows users

to create new classes. dBase 5.0 for Windows sells for \$795. Registered users of dBase DOS can upgrade for \$295.

Borland International (Australia)
Phone: (02) 911 1053

A Windows cleaner

SOFTWARE Suppliers has released UnInstaller 2.0, a software product designed to keep Windows clean by removing unwanted or older versions of applications, and all references to them.

It also locates and removes unused fonts, video drivers and components you no longer want taking up valuable hard disk space. It locates and removes duplicated and orphaned files and removes File Manager extensions.

UnInstaller includes SmartLinks

that scans all executable code for applications running under Windows, as well as DOS, and will determine which DLLs, DRVs, DATs, etc can be deleted safely.

UnInstaller supports Norton Desktop for Windows and other Windows shells. It offers an Undo option allowing users to restore any application that has been uninstalled. It also offers a built-in File Viewer.

UnInstaller is available as a network version with 10, 25, 50 and 100-user licences. The network version features Smart Decoy which allows network users to uninstall those parts of installed applications residing on their workstations.

Prices start at \$99.
Software Suppliers
Phone: (02) 888 1955



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The Edge Multimedia Kit out performs any other Multimedia Kit.

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The Edge Multimedia Kit is FULLY compatible with Sound Blaster™ Pro, Microsoft® Windows Sound System™, Adlib®, CovoX® Speech Thing and Disney® Sound Source.

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Source Mitsumi Laboratory, Japan

Comparison Chart*	Mitsumi FX001D	Panasonic CR563
Search 1/3 stroke (Ave. 100 times)	283 ms	392 ms
Search full stroke (Ave. 100 times)	459 ms	646 ms
Disk Motor	Brushless	Brush
Dust Protection	Yes	No

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PERTH: Ph (09) 472 1877 Fax (09) 472 1878 NEW ZEALAND, AUCKLAND: Ph (64) 9 358 1108 Fax (64) 9 358 4238

TLA/ET101R



Lightning Fast Winners!

Congratulations Microarts! Winners once again. The Microarts Power-Pro Pentium 66MHz PCI has just been awarded the "EXPERTS' CHOICE" award *(Windows Sources Australia July 1994)*.

Windows Sources said "It left all comers, including the 90MHz Optima, eating its dust." Not bad for a 66MHz machine, and proving that 'MHz' means nothing unless you can unleash the true power of Intel's Pentium technology.

That is what we do best. Microarts computers are built to be the fastest in Australia, and they're built to be award winners, with Microarts winning more 'Best Buy' and 'Editor's Choice' awards than any other Australian computer company.

Now that's powerful stuff!

POWER-PRO P60 PCI/VIDE

POWER-PRO VLB

POWER-PRO PCI

by *Microarts*



Windows™ SOURCES AUSTRALIA EXPERTS' CHOICE

Windows Sources - July 94

"The Microarts system was the fastest in almost every test."

"It left all comers, including the 90MHz Optima, eating its dust."

"If you buy the Microarts, what you are purchasing is a bundle of high quality components and workmanship coupled with plenty of grunt."

"Microarts wins 'BEST BUY' for Pentium machines under \$5,000.00."

"Here, the undisputed graphics champ was the Microarts Power-Pro Pentium PCI."

ONLY MICROARTS CAN HARNESS TRUE PENTIUM™ TECHNOLOGY!

PENTIUM™ PROCESSORS OR DX4-100MHZ: Introducing the latest in Processing Power!

Introducing the Intel Pentium™ processors and 486-100MHz DX4. They're Intel's latest Rocketships! What makes the Pentium processor different from previous processors? The amazing "Superscalar Technology" utilised in Pentium Processors allows two instructions to be carried out at one time, cycling at 60 or 66MHz and now 90MHz, resulting in over 100 Million instructions per second and more with the new 3.3V Low Power Pentium 90MHz processor.

The 486-100MHz DX4 screams, offering similar power to the Pentium processor in some software applications. Our cached DX4-100's will boot Windows in around 3 seconds! (Based on a cached boot).

And only Microarts can harness true Pentium and DX4 technology. We've proved it by winning Australian PC World's "Best Buy" awards with our Power-Pro P60 (with Pentium 60MHz processor) and 486 PCI.



VESA OR PCI BUS ARCHITECTURE:

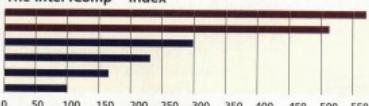
Introducing the latest in PCI Technology!

Choose your Bus! Microarts can offer VESA Local Bus or PCI Bus technology with our Power-Pro P60/66 PCI using the Pentium and PCI bus technology to take performance to incredible heights. The PCI Bus can support a 132 Mb/Sec data transfer rate eliminating I/O bottlenecks. Our Diamond Stealth 32 & Viper PCI Graphics Accelerators lead the world in "PCI Performance" and true "Heavyweight Graphics Punch". Also our PCI Fast/SCSI-2 and PCI IDE Cache Controllers deliver the type of performance you've always wanted (and needed). The SCSI Interface ensures compatibility with CD ROMs, Tape & Floptical Drives for the future, and our PCI IDE Cache Controller blows disk intensive applications out the door!

PROVEN BRAND NAME PERFORMANCE:

Microarts doesn't take any chances when it comes to harnessing Pentium technology - we only use proven brands from "World Leaders" such as Diamond and when combined with our R & D skills, you can be sure that our computers will always be faster, more featured and better value than the competition. We proved it by winning "Best Buy" awards with our Power-Pro P60 (PC World - March 94) and PCI 486 (PC World - April 94). Take a close look at what goes into our systems, and listen to what the critics say. And then call Microarts...who else?

The Intel iComp™ Index*



*The iComp Index is an Intel microprocessor "Powerpoint" rating. It is a composite of selected performance measurements from SPEC 92, ZD Bench and Whetstone. Source: iComp™. A simplified measure of relative Intel Microprocessor Performance, Intel Corp., 1992.

MICROARTS AUSTRALIA GROUP

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BRUNSWICK: (03) 380 4600 ADELAIDE: (08) 374 3310 FAX (08) 276 8877

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Microarts 60/66MHz Power-Pro P60 PCI

- Intel™ 60/66MHz Pentium Processor - 16k 1st Level Cache
- 256k Write Back Caching expandable to 512k
- 3 x PCI Slots, 5 x ISA Slots
- 8MB Ram on Board Expandable to 192MB using 72 Pin Simms
- Panasonic 1.44 MB 3 1/2" Floppy Disk Drive
- Conner 540MB Fast/SCSI-2 High Speed V/Coil Drive - 128k Cache - Fast Access
- PCI Fast/SCSI-2 Disk Controller & Software Drivers
- SCSI Support for 3.5" & 5.25" Hard Drives, Tape Backups etc
- Diamond Stealth 64 PCI 2MB VRAM Graphics Accel, up to 120Hz refresh
- Stealth 64 - World's Fastest Graphic Accel - up to 1600 x 1200 Res
- Diamond In Control Productivity Software for Windows
- Accelerated ACAD, OS2, Windows NT & SCO Unix Drivers
- ViewSonic 15 Energy Star™ Low Rad Flat Screen Colour Monitor
- Microprocessor Controlled .27 Dot Pitch - Up to 1280x1024 Non-Int Res
- M'arts Pro-Series Desktop, Medium or Full Tower Cases - 230/250W
- 2 Serial Ports and 1 Parallel Port
- Microsoft Serial Mouse V2.0 and Mouse Pad
- BTC 101 Key Enhanced Keyboard
- Microarts 5 Year Warranty Plan - 5 Years Labour - 2/3 Years Parts

60MHz Ver \$4895.00 66MHz Ver \$4995.00

POWER PACK OPTIONS: Qlogic PCI Wide SCSI-3 Cont - Add \$495.00
Diamond Stealth 64 4MB VRAM PCI Accel - Add \$250.00
Ms DOS 6.21 & Windows 3.11 Workgroups - Add \$180.00

Microarts 486-66/100MHz Power-Pro VESA Energy Star

- Intel486™ DX2-66MHz or 486DX4-100MHz Processors
- 256k 2nd Level Cache - Green Chip Set
- 2 x VLB High Performance Slots - 5 x ISA Slots
- Type 3 Zero Insertion Force Socket - Pentium OverDrive™ Socket Ready
- Energy Star Compliant System - Full System Power Management
- 8MB Ram on Board Expandable to 64MB using 72 Pin Simms
- Panasonic 1.44 MB 3 1/2" Floppy Disk Drive
- 420MB Fast/ Enhanced Mode 3 IDE V/Coil H/Drive - 128k Cache - 12ms
- Tseng Labs W32P 1MB Expandable to 2MB Graphics Accelerator - Supports up to 90Hz Refresh and up to 1280 x 1024 Res - Exceeds VESA standards
- New Model 3 Enhanced IDE (up to 11Mbps/Sec) VLSI Disk Accel built in
- ViewSonic 15 Energy Star™ Low Rad Flat Screen Colour Monitor
- Microprocessor Controlled .27 Dot Pitch - Up to 1280x1024 Non-Int Res
- 2 Serial - 1 Parallel - 1 Games Port
- Microsoft Serial Mouse and Mouse Pad
- BTC 7939 101 Key Enhanced Keyboard
- 5 Year Warranty Plan - 2/3/5 Years Parts

66MHz Ver \$3095.00 DX4-100MHz Ver \$3995.00

POWER PACK OPTIONS: Diamond Stealth 64 2MB VLB Accel - Add \$400.00
Ms DOS 6.21 & Windows 3.11 Workgroups - Add \$180.00

Microarts 486-66/100MHz Power-Pro PCI/VESA

- Intel486™ DX2-66MHz or 486DX4-100MHz Processor
- 256k 2nd Level Cache Expandable to 512k
- Type 3 ZL Socket suits 486DX2-66 or DX4-100 Pentium OverDrive™ Ready
- 8MB Ram on Board Expandable to 128MB using 72 Pin Simms
- 3 x PCI - 1 x VESA Slot - 4 x ISA Slots
- Intel Green PC 82420EX PCI Aries Chipset - True PCI Design
- Panasonic 1.44 MB 3 1/2" Floppy Disk Drive
- 420MB Fast/ IDE V/Coil Drive - 128k Cache - 12ms Access
- Diamond Stealth 32 W32P 2MB PCI Graphics Accel - Supp up to 90Hz Refresh
- Supports 800 x 600 x 16.8 Million Colours & 1024 x 768 x 64k Colours - NI Comes with In Control Utility Software, Accelerated Windows/CAD Drivers
- PCI IDE 32 Bit Disk Cont with Enhanced PCI Drivers - High Disk throughput
- ViewSonic 15 Energy Star™ Low Rad Flat Screen Colour Monitor
- Microprocessor Controlled .27 Dot Pitch - Up to 1280x1024 Non-Int Res
- M'arts Pro Series Desktop or Medium Tower Cases - 200/230W
- 2 Serial Ports - 1 Parallel Port - 1 Games Port
- Microsoft Serial Mouse and Mouse Pad
- BTC 7939 101 Key Enhanced Keyboard
- 5 Year Warranty Plan - 2/3/5 Years Parts

66MHz Ver \$3395.00 DX4-100MHz Ver \$4295.00

POWER PACK OPTIONS: Diamond Stealth 64 2MB PCI Accel - Add \$300.00
Qlogic PCI Fast/SCSI-2 & Wide-SCSI Cont & 540MB SCSI-2 Dr - Add \$695.00
Ms DOS 6.21 & Windows 3.11 Workgroups - Add \$180.00

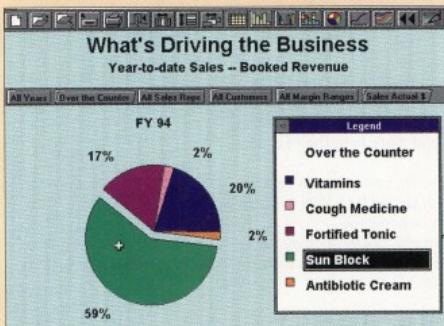
Business intelligence software

COGNOS has announced PowerPlay 4.0, the latest version of its Windows-based business intelligence software used to provide corporate data to managers and executives.

Features of the multidimensional reporting tool include ranking of best-sellers and top performers across various time periods; a briefing book called *Portfolio* which is used to assemble report collections to communicate results with other managers via Windows

OLE functions; and administrative capabilities to subset, secure and distribute multidimensional information within departments and workgroups.

The *Portfolio* portion of PowerPlay 4.0 allows



printing of PowerPlay reports.

PowerPlay version 4.0 sells for \$995.

Cognos

Phone: (02) 437 6655

managers to cut and paste PowerPlay reports or other OLE objects into presentations for distribution to other users.

Other features in PowerPlay 4.0 include access to additional local data sources such as Paradox, dBase, Fox Pro and Clipper; intelligent time and relative time choices such as Prior Year-to-Date which are automatically updated as new data appears; and batch running and

LightShip Professional

LIGHTSHIP Professional version 4.0 is a Windows-based graphical user interface that lets users access and analyse data from multiple sources and formats.

It is the front end of the LightShip Suite, a business intelligence system for accessing and analysing massive amounts of critical business data in a client/server environment.

LightShip Professional Version 4.0 features geographic mapping capabilities, programming advances, and enhanced 3-D graphics.

Version 4.0 includes Map Objects, advanced geographical mapping capabilities. Map Objects offers business users an interface for navigating through customisable maps.

The Map Objects feature allows users to zoom closer or further away from a particular location on the map for a fuller view of a specified area on the map.

Major programming advances have been added in Version 4.0

including embedded BasicScript language and Table Objects.

Table Objects allow developers to provide end-users with a simple way of presenting data.

Version 4.0's enhanced 3-D graphic capabilities offer full implementation of 3-D graphs.

LightShip Professional offers access to mainframe, mid-range, and PC data with the most complete set of database connections in the industry, including DB2, Oracle, Sybase, Ingres, SQL Server, NetWare SQL, dBase, Paradox, OS/400, Rdb, Excel, 1-2-3 and Lotus Notes.

Pilot Software

Phone: (02) 975-2380

Automated storage management

SAMS:Vantage 2.0 is the latest addition to Sterling Software's family of storage management products. It is an object-oriented, client/server-based automated storage management system that allows storage administrators to manage

MVS data from a PC workstation running Windows. It includes an optional component that provides access to DFHSM information.

This allows storage administrators to view, filter, sort, analyse and report on DFHSM objects such as BCDS, MCDS and message logs.

The product is sold in components. The base system provides the ability to view, sort, filter, analyse, execute commands, schedule job submissions and report on objects such as datasets, volumes, storage groups and DFSMS management classes.

The Automation Component delivers automated responses to a variety of storage management conditions for objects.

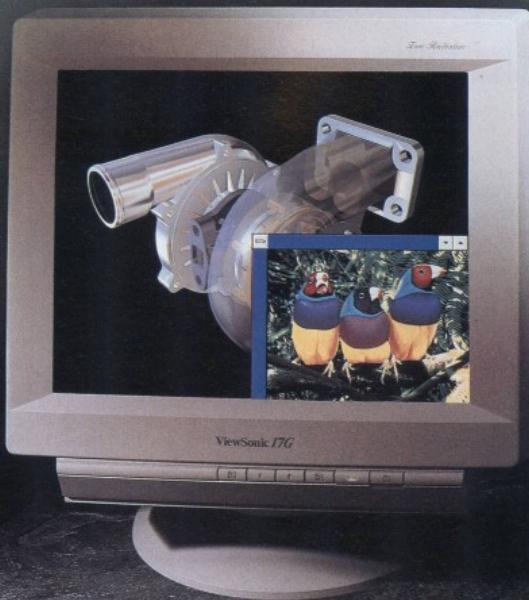
These include percentage used, percentage idle space, fragmentation, and percentage of space quota.

Prices for SAMS:Vantage, including the PC component and the MVS subsystem, start at approximately \$22,000 for a Group 40 processor.

Sterling Software

Phone: (02) 975 4777

You're In Control.



With OnView.TM

Introducing the ViewSonic 17G — the first in our "Graphics" line of monitors. It's unique! It's powerful! And it's affordable!

This unbeatable monitor features the OnView™ control system, an innovative technology that displays the status of each adjustment and function on the screen. Yes, OnView does make it very easy to adjust controls with precise accuracy. Two of the "hottest" controls are: ViewMeter™, which shows the current refresh rate and scanning frequency of the monitor, and ViewMatch™, that adjusts screen colors to closely match printer output.

And it's "green"! The ViewSonic 17G supports the EPA's Energy Star program and meets VESA® DPMS™ standards. This monitor is also compliant with MPR-II standards for low radiation.

If that isn't enough, the ViewSonic 17G has a special ARAG™ anti-reflection coating, Invar shadow mask and a specially-designed

dynamic beam focus gun which provides a sharp, crisp screen image.

This feature-rich 17-inch monitor beats the competition — and the retail price is more economic for you!

PC Show — Melbourne

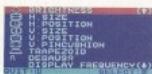
August 9-12

Booth # 234

Comtec Show — Adelaide

August 2-4

Booth # 102



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Microbits Tel (08) 3629220 Fax (08) 3628445

Comdek Tel (09) 3242344 Fax (09) 3242304



COMMUNICATIONS**Marathon server**

DATACRAFT has announced the Micom Marathon 20K network server that integrates data, voice, fax and LAN traffic. It joins the Marathon 1K, 5K and 10K product family and is based on MicroBand ATM technology. Each 20K model can support up to 50 remote sites and consolidates data, voice, fax and LAN traffic over ISDN and DDS lines. It supports multiple lines to remote sites and also switches voice in digital form.

Features include cell-based MicroBand ATM technologies, high-speed local interconnect links, compression, and support for integrated networks.

To increase network reliability, a redundant power supply called Power Plus is available for the Marathon 5K, 10K and 20K models. The power suppliers share the load between them and either one can take over completely should the other one

fail. The Marathon 20K supports multiple links to remote sites and also switches voice in digital form. It can handle asynchronous or synchronous protocols and supports connection to devices such as LAN bridges and routers.

A Remote Terminal Server option of the Marathon 20K provides a LAN gateway for asynchronous users at remote sites.

Datcraft
Phone: (03) 727 9111

Madge PCMCIA card

THE Smart 16/4 PCMCIA Ringnode is a high-performance credit-card-sized token ring adaptor for portable PC connectivity.

Features include 512K on-board adaptor RAM, providing buffer space for data frames and allowing combinations of up to four protocols to be downloaded onto the PCMCIA adaptor; LAN Support Software — the Madge Smart Software protocols

are downloaded onto the adaptor card and executed on the processor within the Texas Instruments' chipset.

This removes the need for Madge to rely on the protocol mappers required by other vendors to convert between one protocol and another. Other features include IFADAP facility, which allows batch files to take different actions if the Madge PCMCIA adaptor is present; and UTP and STP media support. The adaptor is supplied with two patch cables to support both UTP and STP systems. All Ringnode products ship with a five-year warranty.

Madge Oceania
Phone: 1 800 653 816

Network fax help

ZETAFAX 3.0 is a server software product that allows users to share a fax modem on a LAN without tying up the PC as a fax gateway. It can be used with scanners, OCR and plain paper printers.

Zetafax handles transmission and receipt of faxes and can run in the background.

It advises the sender who did or did not receive the fax message in a group send situation, and it allows fax numbers to be designated as off-peak for automatic re-scheduling of fax messages.

The fax server allows messages to be marked as urgent and rushed through the queue. Non-urgent faxes can be submitted for sending at a lower priority.

If poor line quality causes a break in transmission, Zetafax will reconnect and send only the remaining pages.

The workstation program lets users monitor faxes sent and received.

Detailed logs for each fax indicate where and when it was sent, and explain the cause of any transmission problems.

Users can also view or print received faxes.

Banksia Technology
Phone: (02) 418 6033 ■

Stackable 15-port EtherSwitch

KALPANA has announced a 15-port Ethernet switch. Designed to complement the connectivity of stackable and multi-segment hubs, the EtherSwitch 2015 RS boosts 10Base-T network performance among hubs and servers while conserving rack space.

The rack and stack EtherSwitch supports existing 10Mbit/sec networks and offers a full-duplex Ethernet. This doubles the bandwidth of any EtherSwitch-to-server and EtherSwitch-to-EtherSwitch link by providing for simultaneous, two-way transmission.

Features of the Kalpana EtherSwitch EPS-2015 RS include virtual networking, address filtering, IEEE 802.1d Spanning Tree Protocol support, EtherChannel and downloadable code. The EtherSwitch is available in standard and enhanced versions.

*The 15-port
Ethernet
switch for
10BaseT
workgroups*

Both support 15 switched 10Base-T ports, on user-selectable AUI ports and up to 6,000 addresses. The units measure 33.6cm by 43cm.

Anixter Australia
Phone:
(02) 333 0800

DESIGNED TO GIVE YOU MORE DRIVE

Sony's latest Magneto-Optical Rewritable Disk Drive technology offers a cost effective way to increase your storage capacity.

An amazing 1.3 Gbytes - that's the capacity you get from a single 5.25" MO disk, double the capacity of the current 5.25" disk.

Double speed performance and Multi-Function convenience MO-WORM is what you can expect from a Sony Drive, making it possible to use a single unit for both types of media. Seek time has been reduced to half that of conventional drives.

Compact dimensions, easy function selection, effective shielding, anti-vibration structure, anti-dust cooling and the ability to interface with SCSI I & II are some of the latest features to be incorporated in this new and exciting range.

From the only manufacturer who makes both the hardware and the media.

DOESN'T YOUR



SONY

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Sparse documentation

May I add to the thoughts of Ed Foster (*PC World* June 1994) regarding sparse documentation?

I recently purchased a PC which included DOS 6.2 and Windows 3.11. The "User Guide" looked reasonably hefty, 3.5mm, but this turned out to be three separate volumes bound together. Each has its own page numbering, but with a Master Index covering all three; every entry in the index is followed by V1, V2 or V3 plus the page number.

No colour coding or thumb-marks to let you know which Volume you're in when trying to turn to page x. Weird, but workable. However, what really annoys me is the first section — "Microsoft MS-DOS 6 Concise User's Guide". Concise is the word — 122 pages as compared to 668 in the equivalent DOS 5 manual.

Now hear this — There is no listing of DOS commands, either external or internal. These two words don't even appear in the Index!

Look in vain for any reference to ANSI, Debug, or that great innovation from DOS 5, Doskey. Want some information on Buffers,

FCBSs, Command.com, Qbasic? The Index won't help. True, the Help screens do have the gen on all these words, but surely the user ought to expect at least basic information in the manual, even if it then refers you to the Help Screen for more detail.

And how about this gem of circularity — the references in the Index under Viruses includes "See also Microsoft Anti-Virus". The only entry under Microsoft Anti-Virus reads, you've guessed it, "See Viruses".

Oh by the way, I stumbled on an invitation at the end of Volume 1 to send some folding stuff to the publishers to obtain a "Resource Kit" which would explain all the commands of the nee Wunderkind, and then, in microscopic letters, the following caveats — no photocopies or facsimiles accepted (in other words you actually have to cut the page out of the book), and finally, "Offer only good in the USA".

Come on guys at Microsoft — is this the best you can do?

- Neville Cohen

Mediocre Modem

I am in the process of reading your June 1994 issue and felt the need to put pen to paper re your review of the Banksia 124FAX-1 internal fax modem. This article distracted from an otherwise excellent issue. There are just too many errors and omissions in this article.

In the discussion on COM ports no mention is made as to whether or not the software and hardware supports non-standard interrupts for COM3 and COM4. The picture in the article shows the modem using COM3, but what interrupt? As you know the standard interrupts for COM3 and COM4 are the same for COM1 and COM2. If you are already using COM1 and COM2 then software and hardware that only allows the use of standard interrupts are of no use as you will still have conflicts.

Secondly, the article states that a class 2 fax "sends and receives at 9600" and that this is better than class 1 which "sends at 9600 and receives at 4800" — what a load of rubbish! A fax modem's receive baud rate is dependent on how much you paid for it, not what class it is.

My understanding of class 1 is that most of the fax functions are left to software control whereas class 2 fax cards only respond to a set of functions/commands with limited software control, and as such a class 1 device is more flexible.

It is only the cheaper cards that have a lower receive baud rate. I stand corrected on this but I know that class 1 or class 2 has nothing to do with data rates. Of major concern was the problem with levels and with sending and receiving faxes. This should not happen at all.

Second, the glossing over the fact that this modem is not supported by Windows 3.11 as it only supports class 1 is significant as most people will already have this on their machines, so why be made to install more software? Would it not make more sense to install a class 1 device and use what is already on your system?

All this wouldn't worry me a great deal except that at the end of the article it gets the thumbs up as "a good entry level fax" when it should read "don't bother".

The fax modem market is just too big, with too many good products to waste two pages reviewing what is essentially a very mediocre device.

- Phillip Hardstaff

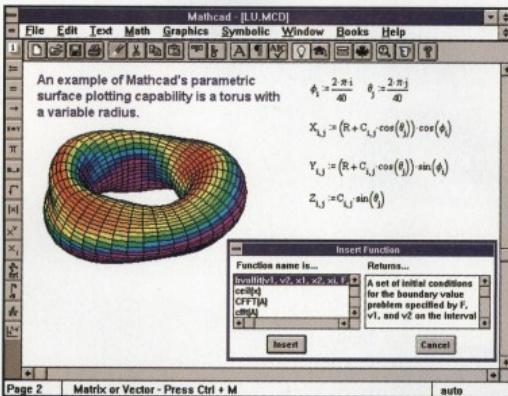
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A guide to the next

WINDOWS operating system

CHICAGO COUNTDOWN

4
The next upgrade to
Windows, code-named
Chicago, is now in the
beta testing phase and is
due for release by the
end of this year.

3
Last month, we printed a
First Look of the product

(see 'Chicago looks
encouraging', PC World
July, p60). This month, we
bring you the opinions of

2
a developer in the US,
Steve Gibson, who
discusses the impact
of new levels of
systems integration

What's so great about Chicago? Although there are a great many things to love about Microsoft's much-ballyhooed Windows upgrade, I believe Chicago's greatest benefit lies in its high level of system service integration. Applications written for DOS, Windows, OS/2, and other operating systems have been hamstrung by a lack of OS-supported integration. History has shown that determination and clever application programming can work around most OS shortcomings, but there's nothing applications can do to cure an operating system that's not strong enough to pull individual applications together into a coherent whole. I believe that Chicago's primary benefit will be its solid cure for this gigantic problem.

I have fax numbers stored in Delrina's WinFax Pro; Internet and corporate electronic mail addresses in Lotus Development's cc:Mail; CompuServe addresses in Support Group's TapCIS; and MCI addresses in Sierra Solutions' Mailroom. Lacking any central, OS-provided address book, application vendors have created their own. The result is a mess of redundancy and hassle. No two address books work in the same way.

By contrast, Chicago's central, extensible address book provides a single OS repository for managing all such information and data. Not only does Chicago sport a centralised address book, its built-in e-mail application leverages another Chicago first: TAPI, the telephony API. With the address book and

TAPI, a single text message can be transparently faxed to one person (faxing capabilities are built-in too), sent to CompuServe for another, Internet for a third, and through a corporate e-mail system for a fourth. And because this e-mail is one of Chicago's new Win32 applets, it operates smoothly in the background.

The integrated central services also include an extensible object browsing utility called Explorer, through which the operating system itself provides a straightforward and consistent interface for browsing through "stuff" in the system. A user can view spreadsheets, data files, e-mail notes, or vendor-specific gizmos. The extensibility afforded by OLE 2.0 allows this common interface to browse and gain access to any number of vendor-specific objects.

A final example is Chicago's encapsulation and "objectification" of modem services. After the system's modem has been identified to the operating system, applications can leverage TAPI to use modem services. For example, an application could pull the user's name, standard mailing address, and software package serial number from the system's much-enhanced registry (sort of a dynamic system and personal preferences database), present it to the user for optional editing, then place a quick toll-free call to a centralised third-party software registration service. At the same time users can be informed of, and optionally receive, any patches or updates that might be available for the software they are registering.

CHICAGO COUNTDOWN

Microsoft appears to have made an honest and comprehensive appraisal of the problems and potential of the current generation of PC software and hardware, then invested heavily to create a quantum leap in capability.

Interface testing pays off

So far I've refrained from drooling all over Chicago's new user interface. Microsoft's extensive profiling and testing of neophyte users has paid off for all of us. Our computers' displays are still not big enough, so most people run with their applications maximised, filling the screen. But this makes switching between applications difficult. You and I may know that ALT-TAB allows us to cycle through our running applications, but I'm always in a hurry. I punch that TAB key too quickly and overshoot the one I want. Then I need a finger-mangling ALT-SHIFT-TAB to back me up to the application I passed.

I'll wager your typical user hasn't mastered these highly non-obvious macho finger manoeuvres. Applications are probably run maximised or not at all. In fact, Microsoft has found that most users are not bothering to run more than one application at a time. Chicago makes switching among applications much cleaner thanks to a neat new screen element known as the taskbar.

All running applications are represented by buttons along the bar with the current application's button depressed. Maximised applications respect the taskbar by not covering it up. They "maximise" just shy of the bar.

With the taskbar, the user simply presses one of the popped-out buttons to switch to another running application. The one that was depressed pops out and the newly selected application appears on the screen. It's way cool.

In addition to improving the integration of the operating system's functions, Microsoft has also beefed up the out-of-the-box functionality. For instance, the system includes a vast array of communications capabilities, including real-time remote access to other Windows file systems

The system includes a vast array of communications capabilities

— across the network, through a modem, or via a broadly defined generic transport for the future. Microsoft has also provided the capability for direct connections to the Internet through native support for a TCP/IP protocol stack, a very powerful new communications terminal program and tightly integrated fax services.

Chicago also includes a complete e-mail package that boasts such remote e-mail access features as the capability to exchange fully formatted and colourful rich-text messages and the option of downloading message headers in advance of the message's full body.

Finally, the familiar applets have grown into really useful applications in their own right. Write supports RTF documents. And at last month's briefing officials described some mysterious updates to the calculator — I suspect that it is a mini spreadsheet. Also included are OLE 2.0 integration capabilities, GUI implementations of all the usual operating system utilities, and more. So Chicago really is a complete operating system plus a collection of the most common and generally useful third-party add-ons, plus a reduced-strength copy of Microsoft's Office suite.

The combination of the more robust applications tools and integrated operating system functions have bulked up Chicago considerably. MS-DOS fits comfortably on three diskettes, and you can carry Windows 3.1 around in your pocket on just six, but at last month's briefing Microsoft indicated, somewhat self-consciously, that a typical Chicago installation would occupy about 35Mb of hard disk space. However, the actual Chicago product will probably bring with it many more megabytes of device-specific drivers, which will only be copied to

your hard disk as needed. I get the feeling that there will be a ton of excess baggage included, just in case. So, if you've not yet made the jump to CD-ROM, now would be a good time to start thinking about hanging that double-speed CD-ROM drive onto your Sound Blaster card. You should seriously consider buying Chicago on CD-ROM.

Goodbye MS-DOS

In addition to much enriched application-level goodies, the Chicago code also consists of a host of fully 32-bit pre-emptive subsystems. At the heart of these is a fully integrated 32-bit protected mode OS that replaces MS-DOS — entirely. This operating system contains a handful of high-performance 32-bit file systems that are modular and can be installed separately. The new Virtual File Allocation Table (VFAT) system (with Chicago's new 32-bit hard disk compression technology tightly integrated) provides striking performance improvements over straight DOS.

The Compact Disk File System (CDFS) fully integrates CD-ROM access into the base OS. And a collection of network redirectors connect Chicago directly to NetWare (IPX), Unix (TCP/IP), Windows NT Advanced Server (SNMP), Desktop Management Interface (DMI), and other networks... and even multiple networks at the same time! All this without the need for any user-installed drivers.

We've seen the last of SmartDrive and swap files. Their functionality has been moved to where it's always belonged: deep inside the core of the operating system where it has access to sufficient information to operate optimally and automatically all by itself. Chicago's virtual memory swap file is automatic and dynamic, expanding and contracting as needed from moment to moment, and its hard disk caching borrows from the system's available RAM, dynamically competing with operating applications for this limited resource. As a result, to a much greater degree than previous systems, Chicago just works right.

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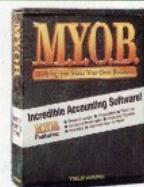
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Remote networking features

In addition to the ability to dial-in to Windows NT RAS (Remote Access Server), which can be done in Windows for Workgroups today, Chicago will support:

- Dial-in to NetWare networks running NetWare Connect
- Dial-in to another Chicago machine using Chicago's built-in single-line remote network server (single-line means it can only support one modem per PC)
- Dial-in to remote access server products like those from Shiva corporation and others
- Simultaneous support of NetBEUI, IPX and TCP/IP

Chicago as an Internet client:

All the plumbing you need to connect to the Internet is built into Chicago. Chicago includes a fast, robust 32-bit TCP/IP stack, TCP/IP being the language of the Internet. In addition to TCP/IP, Chicago will also provide PPP, or "dial-in support". This means that Chicago is Internet-ready, whether you dial into a commercial Internet provider or you have access to the Internet via your corporate network over TCP/IP. Chicago also includes utilities to help you take advantage of the Internet, such as telnet and FTP.

Over on the Windows API side we have a new 32-bit pre-emptive multitasking OS kernel with 32-bit memory management and pre-emptive task scheduling. The printing and communications subsystems have been completely rewritten to provide a Windows that can print and communicate smoothly in the background while the user saturates the machine's resources in the foreground. Chicago also provides a fast 32-bit TrueType font rasteriser, which generates smoother anti-aliased fonts.

The design of Chicago's core architecture was driven by a number of competing and conflicting goals. Chicago is a "triple-API" operating system that simultaneously supports DOS, Win16, and Win32 applications. And while there are elegant, safe,

reliable and simple ways of implementing an encapsulated triple-API operating system, these approaches would not have met Microsoft's stringent limits for system resource consumption. Microsoft officials told us at the briefing that when operating within a mere 4Mb of RAM, they hope Chicago will deliver approximately Windows 3.1 performance.

Even in light of this ambitious goal, I no longer consider 4Mb a reasonable Windows platform. The first place I would place any excess money is into more RAM. When allowed some breathing RAM, the benefits of Chicago's largely pre-emptive 32-bit design, and its full 32-bit protected mode file system begin rapidly pulling it ahead of all other competing operating platforms.

To make Chicago as small as possible, Chicago's designers had no choice but to hybridise their support for the Win16 and Win32 APIs, then hack away at the resulting non-trivial compatibility challenges. If anything causes Microsoft to miss its late 1994 ship date, I believe it will be the daunting issues of Win16 application compatibility that lie ahead. In light of Chicago's completely rewritten environment, it won't be easy to trick some of the more sensitive Win16 applications into believing that they're still operating under Windows 3.1 . . . which is exactly what Microsoft must achieve.

Perhaps the biggest compatibility hurdle takes the form of pre-emption management. We've all heard that Win16 applications co-operatively multitask. This means that a Win16 application never loses control of the computer to another application; instead, it relinquishes control to the operating system, which then decides which application should run next. In contrast, pre-emptively multitasked applications are written to protect themselves from the many side-effects of interapplication pre-emption.

Imagine an application that is performing a co-ordinated update to several fields of a shared database. A Win16 application can safely assume that no-one else can access the database while it is running, so the

Win16 application simply reads fields and changes them as it pleases. However, a Win32 application knows that anything can happen at any time, so it explicitly acquires and locks the range of fields it wants to read and update. This guarantees that no other process can alter the fields while it's using them — even if another application gets control during this time.

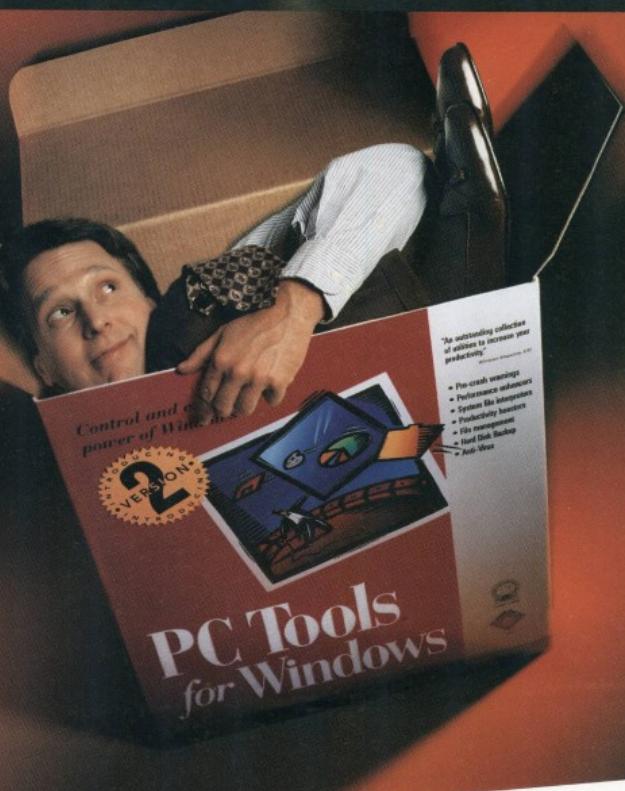
Now imagine the challenge of having civilised pre-emption-aware Win32 applications cohabitating with uncivilised pre-emption-naïve Win16 applications. Whereas a Win32 application knows how to be told by the OS that a shared resource (such as our database fields) is unavailable for the moment, and can then elect to either wait for the resource or go without, Win16 applications have no such sensitivity.

Win16 applications also expect to be operating within an Intel-style segmented address space as opposed to the more modern 32-bit flat address model. Our 16-bit applications also make all sorts of assumptions about how this space is shared with other Win16 applications, even to the extent of passing access "handles" around to things they don't even own. All this means that Win16 applications will be sensitive to virtually anything that differs from the Windows 3.1 environment.

So Chicago's designers have taken great pains to create a virtual Windows 3.1 environment with Chicago. All Win16 applications share a common address space and the same single message queue, allowing them to continue playing the same games they have in the past, and Win16 applications continue to be non-pre-emptively multitasked with each other in order to simulate the co-operative multitasking environment they grew up counting on. Just as Windows created the concept of a "DOS box" for MS-DOS applications, you can think of the Win16 operating environment as a "Win16 box" within Chicago.

• Steve Gibson is president of Gibson Research Corp in Aliso Viejo, California

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dBase makes a Windows comeback

When Windows swept across our desktops, there was a whole raft of market leaders left behind, sinking under the belief that business would prefer DOS to Windows applications. WordPerfect and Lotus, for example, were late in building Windows versions of their popular applications and suffered mightily for it.

Another loser was Ashton-Tate's — now Borland's — dBase, a product that dominated the PC database scene just a few years ago and only now attempting a comeback with a Windows version.

Judging from the latest beta release of dBase for Windows, Borland is unlikely to ever regain its once formidable lead. It's a simple case of too little, too late. There are too many strong Windows object-based competitors, such as Microsoft Access and FoxPro for Windows, and Borland's own Paradox for Windows.

That said, dBase for Windows has one terrific edge over the competition: a huge installed base of DOS-based legacy dBase applications that businesses cannot afford to scrap. dBase for Windows is fairly impressive in that it gives you GUI objects and still runs existing dBase III Plus and dBase IV code. We were able to load, compile, and run one of our old transaction processing benchmark applications with very few changes. The output was not accurate, but then we were running a beta.

The product has many of the latest GUI development tools and gadgets, such as navigation boxes, pop-up configuration tools, step-by-step form builders (somewhat like Microsoft Access' Wizards), and connections to server-based databases. For the most part, the interface is easy to use, making the

most of the Windows environment. The Navigator is not as powerful as Access', but it's nicely designed. dBase for Windows' toolbar can be placed in various locations using the desktop properties options. Unfortunately, it's not easy to tell what a particular tool icon does.

Two-way development

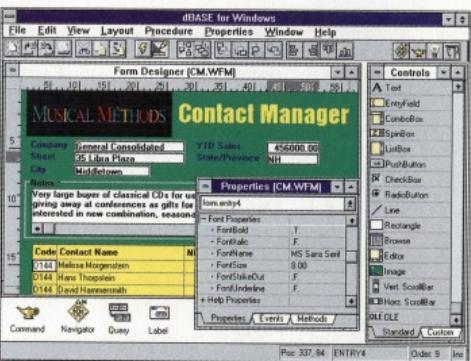
dBase for Windows does a fairly nice job of supporting both event-driven Windows objects and traditional dBase coding. Using its graphical forms design tool, you can build data entry forms, reports, and queries with simple drag and drop. As you create these GUI objects, open database files, add records, or run other menu-based dBase for Windows commands, the application writes the appropriate code into editing and command windows. You can copy and paste the code into other applications or manually change how your application works. It's easy, for example, to set up control buttons that appear or disappear

depending on specific conditions.

Building dBase for Windows tables, forms, queries and reports is not much different from other Windows databases, and as you would expect, it's far easier than the DOS versions of dBase. Each of the objects (buttons, list boxes, fields, etc) has its own properties and procedures, and you can make changes by clicking on the right mouse button. It is not as complex or as flexible as Access' design options, but dBase experts should feel more comfortable with dBase for Windows.

Borland also seems to have done a good job of extending the existing dBase language into the Windows environment. You have access to the Windows API and DLLs. Once an external DLL function is declared with the EXTERN command, it can be used just like other dBase functions.

We were also impressed with dBase for Windows' Debugger — a feature that was inadequate in the DOS versions. When you launch ▶



dBase for Windows has an objects-based interface. Each of the objects has its own properties and procedures

Debugger, a separate application, you get four small screens through which you can set breakpoints, step through your code, and monitor the values returned by expressions and calls as they execute.

The most important test for dBase for Windows will be its capability to run existing dBase applications with little or no modification. Our attempts to run our older database benchmark indicate that dBase for Windows is close, but not perfect. Our benchmark has about 1,000 lines of code and simulates a simple transaction-processing application. When we compiled the code under dBase for Windows, we got three "Command not functional in dBase for Windows" warnings, meaning we had three environmental settings that were not applicable in Windows.

There were a few problems running our newly compiled benchmark. The most annoying was the windows setting: dBase for Windows ran the application's text-based menu screen in a small window, rather than on the full screen as the application was designed to do under DOS. A bigger problem was the output from our queries and reports, neither of which was accurate. For example, our application writes reports to a text file. When we looked at the file, the data was there but there was a lot of extra garbage. The benchmark also seemed to run very slowly. The beta we received was still extremely buggy — we will look at these issues again in the shipping version.

dBase for Windows is an interesting product, primarily due to its ancestry. If the final version is fast and stable, it should make hard-core

dBase developers happy. It will give them a relatively painless upgrade path for moving their applications from DOS to Windows. However, if you are not locked into legacy dBase applications, you are better off looking elsewhere.

*- Tracey Capen, Terence Ng,
and Laura Wonnacott*

dBase for Windows

The Windows version of the popular DOS relational database, with a two-way development system for writing code and creating objects

Price: \$795; upgrade from DOS versions \$295

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LANtastic 6.0 gives server-based LANs a run for less money

Peer-to-peer LANs, which let you network PCs without having to dedicate one system as a server, have found a home in small offices and workgroups. But in corporate environments, peer-to-peer LANs have been the Rodney Dangerfield of connectivity, not getting much respect from system administrators running complex and expensive client/server-based LANs. LANtastic 6.0 could change all that.

The latest incarnation of Artisoft's flagship package still has all the capabilities of a peer-to-peer LAN, plus features and performance that eliminate many weaknesses (such as lack of security and few management tools) cited by peer-to-peer naysayers. LANtastic 6.0 is the only peer-to-peer network you can easily and inexpensively incorporate into most client/server networks. LANtastic workstations can act as clients to server-based LANs including Novell NetWare 2.x, 3.x and 4.x; Windows NT Advanced Server; and Windows for Workgroups 3.11.

As a stand-alone network, LANtastic shines. Version 6.0 incorporates a new, tunable burst mode and an integrated SHARE facility that increase performance dramatically over previous versions of the product. Your mileage may vary depending on the programs you run and on overall network traffic, but I found it particularly fleet for networked database applications. And to further maximise performance and available RAM, LANtastic's server components are modular; you choose only the features you need.

You don't need Windows to run LANtastic 6.0, but it helps if you take advantage of LANtastic's most impressive feature, Artisoft Exchange. This full-fledged Windows groupware application expands the limited messaging facilities of earlier LANtastic versions. It includes powerful mail, scheduling and fax facilities and support for numeric and text pagers.

New security features and integrated management should

soothe nervous system administrators. You can choose multiple levels of security, from none all the way down to individual files. And you can monitor server configuration, status and performance from any workstation — even receiving automatic warnings when disk space gets low or the network nears processing capacity.

LANtastic's versatility is unique; you can use it out of the box for simple LANs, or fine-tune it for more complex installations. Artisoft has upped the prices slightly from those prior versions and has eliminated the unlimited-use licence. But with prices starting at \$175 per PC (software only), LANtastic 6.0 has nearly all the features and performance of a server-based LAN, at a fraction of the cost.

- Stan Miastkowski

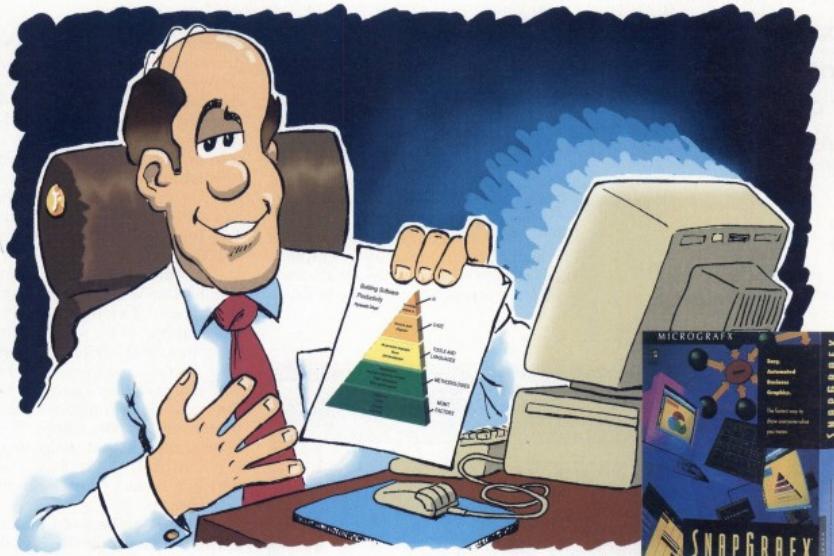
LANtastic 6.0

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Corel adopts the suite approach

CorelDraw 5 ships with hundreds of fonts, thousands of clip-art images and a coupon for a free copy of Ventura Publisher 5

Contrary to the popular opinion, CorelDraw is *not* a drawing program. This may seem a radical claim, but Corel is essentially a single-page publishing tool.

Sure, CorelDraw lets you whip up images from scratch, but its forte is letting you plop objects — fonts and clip art, for instance — onto a page where you can manipulate them. Corel comes with hundreds of TrueType and PostScript fonts and thousands of classy clip-art images you can skew, stretch, flip and otherwise contort.

You also get a satchel of utilities ranging from presentation graphics to bitmap tracing. A decent file converter imports and exports more

than 40 bitmap and vector formats, although it can't beat dedicated utilities such as Hijaak.

All in the family

Not surprisingly, a quick spin with a prerelease copy of CorelDraw 5 shows that this kitchen sink approach to graphic arts still dominates the product. For starters, \$1,295 (\$995 on CD-ROM) also gets you a coupon for a free copy of Ventura Publisher 5, which you send to Webster Publishing. Ventura finally has a Windows interface plus 825 TrueType and PostScript fonts and 22,000 clip art images.

In the interface category, CorelDraw, Ventura Publisher, and their posse of modules finally look like members of the same family. The programs sport similar tool bars and offer floating toolboxes and menus you can place anywhere on screen. They also share components such as import and export filters, fills and texture menus, and dialogue boxes for calibrating screen colours between colour printers, monitors and scanners.

Integration between modules is enhanced with limited OLE 2.0 support; you can now drag objects from one Corel application and drop them in another. For example, you could drag a pie chart created in CorelChart and drop it in CorelDraw. But only Ventura supports in-place editing — an OLE feature that lets you edit an embedded object on the spot without loading the application that created it.

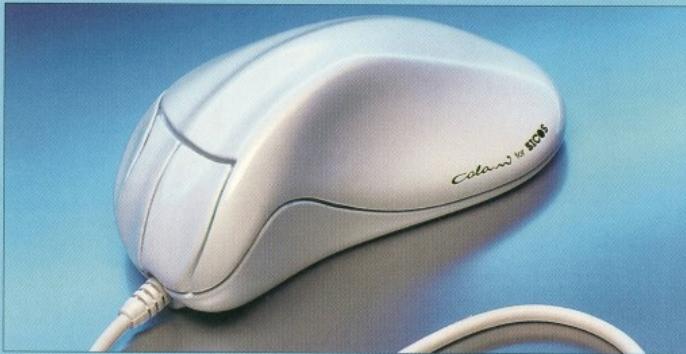
Naturally, Corel has some new graphics goodies: A lens feature lets you magnify, invert and overlay images to create photorealistic transparencies; you can join different paths and seamlessly meld two ▶



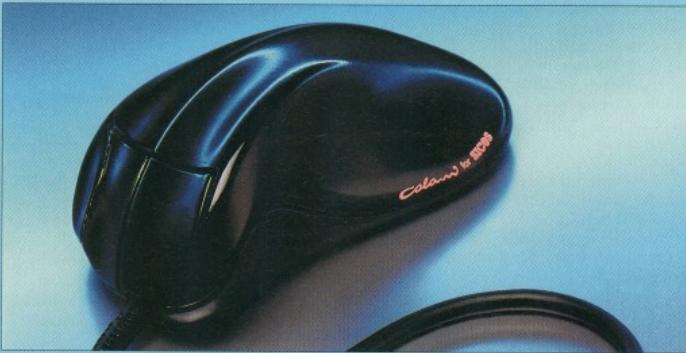
Photorealistic effects are easy with Corel's new Lens feature, which lets you magnify, invert and overlay images

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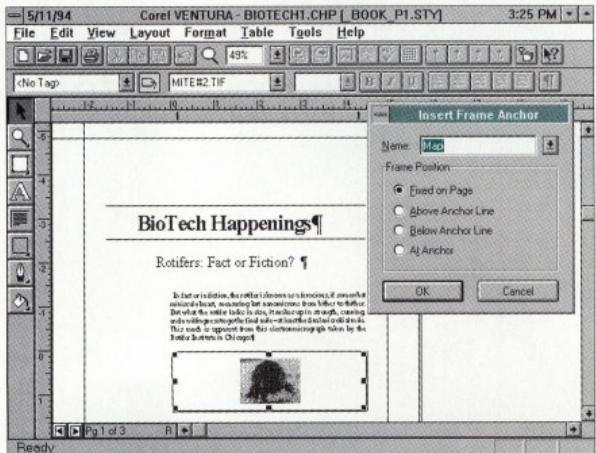


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The Windows look for Ventura — Ventura matches the Corel interface from toolbar to roll-up and portable menus

objects drawn separately (such as a vase and a handle); and you'll find some new 3-D extrusion effects. There's one extra that everyone will appreciate: A pared-down version of Ares Font Minder enables you to create custom font groups.

Bug corral?

But while all of these changes are welcome, some important questions remain unanswered. When Corel 5 ships, will it be relatively bug free, or will users suffer through repeated revisions to fix bugs, as in the past?

To ensure a smooth upgrade, Corel has doubled the number of beta testers for this version and set up an automated testing lab that runs the program through thousands of operations.

Fast draw

Another unknown is speed. The company claims that version 5 will be noticeably faster, but it's also essentially upped the system requirements. You can run CorelDraw on a 386 with 8Mb of RAM, but sanity dictates a 486 with 16Mb and — if

you opt for Ventura — a speedy hard disk with 50Mb of free space.

The company vows that other tweaks will make Corel 5 skip along merrily. Redraws should be faster because 5 does more of its own memory management. It takes greater advantage of maths co-processors, which will speed functions such as redrawing transformed objects. And if you change part of the screen image by, say, opening a menu, Corel will sometimes redraw just the affected part of the screen.

Talk to the beta testers who live with CorelDraw every day, however, and they point to the mundane improvements in functionality that should make all Corel users more productive. For example, Corel's ruler finally displays tabs, so you can manipulate paragraphs on the spot.

If you load a Corel file that uses fonts you lack, the program now lists installed fonts that closely match the missing ones. Another treasured addition, Type Assist, replaces abbreviations as you type and automatically capitalises the names of

days and the first letter of every sentence.

Publishing pros probably benefit the most from the Ventura 5 enhancements. The program finally looks and feels like a true Windows program. It matches CorelDraw's look from tool bar to floating menus and adds better file management, the ability to rotate text, and graphics text wrap around irregular objects.

CorelDraw has some key output enhancements too. It now automatically downloads PostScript fonts to your printer and, more important, embeds the correct font names in exported EPS files, which makes dealing with documents at your local service bureau a lot more predictable. Corel's colour management feature lets you match colours accurately from one device (such as a monitor) to another (such as a colour printer). You can also preview colour separations and even Kodak PhotoCD images and do some colour correction.

However, CorelDraw 5 still lacks some typographic basics: tracking, a sharp justification algorithm, and long-document features such as automatic page numbering.

— Robert Luhn

CorelDraw 5

Desktop publishing and graphics program

Pros: Lens and masking tools; free Ventura Publisher 5 option; more consistent interface; better font handling

Cons: Lacks some typographic basics such as tracking, and long-document features such as automatic page numbering.

Summary: The beta version is full of welcome changes but when the full version ships will it be bug free or will it suffer through repeated revisions to bug fixes?

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Another month, another DOS upgrade

As Microsoft, IBM and Novell — the software industry's triumvirate of DOS providers — continue their game of DOS one-upmanship, PC users are left pondering the eternal question: whose DOS does what?

The latest entrant in the DOS field is IBM's PC DOS 6.3, an upgrade from 6.1. New with this version are integrated file compression and a collection of incremental improvements. While PC DOS 6.3 lacks the knockout punch that captures headlines, you can't argue with its price: it's free to PC DOS 6.1 users (via the Internet), \$109 if purchased through a store, and \$189 to users of other versions of PC DOS as well as competitive brands from Microsoft and Novell.

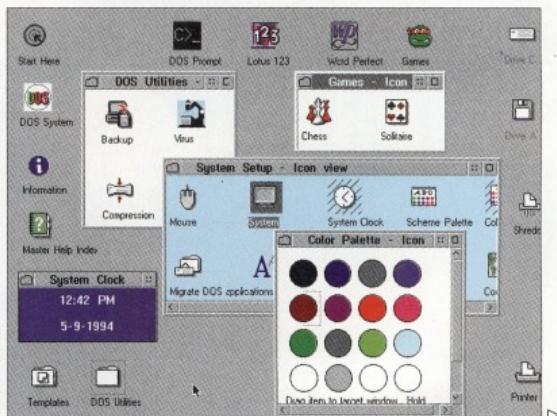
No more coupon

While data compression is one of version 6.3's key features, it's not new to PC DOS. Copies of 6.1 came with a coupon for a free copy of SuperStor, a data compression package from the now-defunct AddStor. In PC DOS 6.3, SuperStor data compression is integrated and converts MS-DOS DoubleSpace compressed files to

SuperStor format. According to IBM, future versions of PC DOS and OS/2 will feature Stac Electronics' Stacker compression software.

Other PC DOS 6.3 improvements are targeted specifically at users of MS-DOS version 6.x and PC DOS 6.1. The new Smart Upgrade installation feature automatically retains all start-up configurations and their menus from earlier versions of DOS 6.0. Similarly, PC DOS's RAMBoost memory manager can now optimise and monitor each configuration setup. PC DOS's antivirus software can now detect more than 2,000 viruses (up from 1,500), and its SmartDrive utility now caches CD-ROM drives.

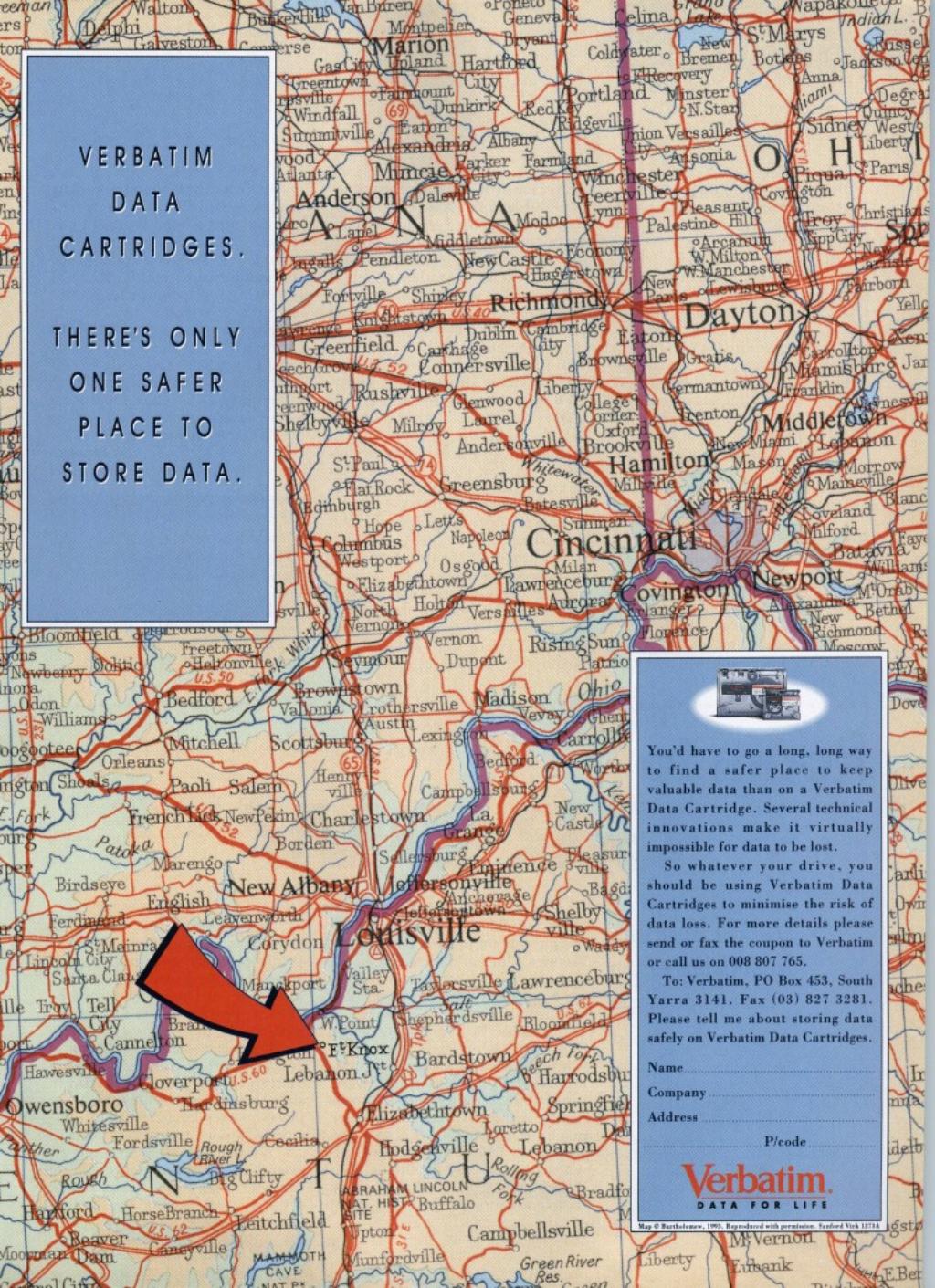
At press time PC DOS 6.3 had a competitive edge over MS-DOS 6.21, which lacks data compression; Microsoft was forced to pull its DoubleSpace compression software from MS-DOS after losing a patent-



Future DOS: IBM is developing a graphical interface to simplify using the next version of DOS

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infringement suit brought by Stac. Microsoft plans to introduce a new version of DOS with a homegrown compression scheme.

There is also a third choice that's particularly attractive to users considering peer-to-peer LANs: Novell DOS 7, which already features Stacker and began shipping earlier this year, is bundled with Novell's Personal NetWare. Novell's merger with WordPerfect may also create additional bundling arrangements. IBM, meanwhile, remains the undisputed bargain of the trio of DOSes — Microsoft charges \$99, and you must own a prior version to buy it, although an upgrade from DOS 6.0 is just \$22.50; Novell will want \$159.

Life after Chicago?

The next version of PC DOS, scheduled for release early in 1995, will include IBM's WorkPlace Shell, an OS/2-like graphical user interface that runs on PCs with as little as 640K RAM. Featuring an integrated file manager, screen saver, and icon

editor, the WorkPlace Shell launches both DOS and Windows programs.

But considering the overwhelming market acceptance of Windows, one must wonder if the WorkPlace Shell is too little, too late. While it may appeal to the dwindling pool of DOS stalwarts, the Shell offers no advantages to Windows users.

Furthermore, the next release of Windows (known as the Chicago Project within Microsoft and scheduled for release by the end of this year) casts a dark cloud over the future of DOS. According to Microsoft, Chicago is a 32-bit operating system that doesn't require DOS but will run DOS applications. If Chicago lives up to its hype, the market for DOS upgrades could fall precipitously.

However, IBM officials suspect that corporate users won't flock to Chicago as quickly as Microsoft believes. The reason: businesses don't want to be guinea pigs for an untested operating system that's bound to have at least a few bugs.

In fact, IBM has stepped up efforts to sell PC DOS to system manufacturers, who typically pre-install MS-DOS on their PCs. According to IBM, more than 40 system vendors now bundle PC DOS, including Dell Computer, which offers it as an option.

Surprisingly, not all of IBM's PCs ship with PC DOS. While it's too early to proclaim DOS's death, the next version of Windows, which incorporates DOS, leaves some doubt as to how popular DOS will be with OEMs in the years ahead.

- Jeff Bertolucci

PC DOS 6.3

The latest iteration of DOS from IBM

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Room to GROW

Performance and expandability from a small package

Into a world of constant size reduction and increased portability, enters Chicony's contender in the subnotebook market — and it delivers heaps of expansion, power management functions and 486 power.

I ran the PC World Test Centre SYSmark93 benchmark against the Chicony, which runs a series of business routines in Windows software. A SYSmark93 performance score is relative to the CPU class to which the machine belongs, in this case the 486SX. The Chicony ran all the software without any problems, and scored 70.90, which is slightly above the average for its class.

The potential of the Chicony to grow does not suffer because of its small size. There are ports to connect an external keyboard and monitor, and the parallel and serial ports (one of each) provide access to printers, modems and the like.

There is also easy connection to an Easy Port or External Docking Station via the Chicony's 120-pin slot. The Docking Station offers two three-quarter-length slots for network adaptors, sound cards and so on. A PCMCIA II socket and an external floppy drive port complete the I/O port connections. Also, there's easy access to all I/O

ports, the battery and the memory expansion area.

Memory can be expanded from the standard 4Mb to either 8Mb or 20Mb by adding a single memory expansion card. My Chicony came with a 2½in 170Mb removable hard disk, which is the largest currently available.

Techno Gallic

Documentation for this baby consists of Microsoft's DOS 6.2 Concise Users Guide, Chicony's Windows 3.1 Users Guide and the Subnotebook Computer Users Guide.

How good is the computer's Users Guide? Mmmm — here's an example of how the manual explains the Suspend/Resume button:

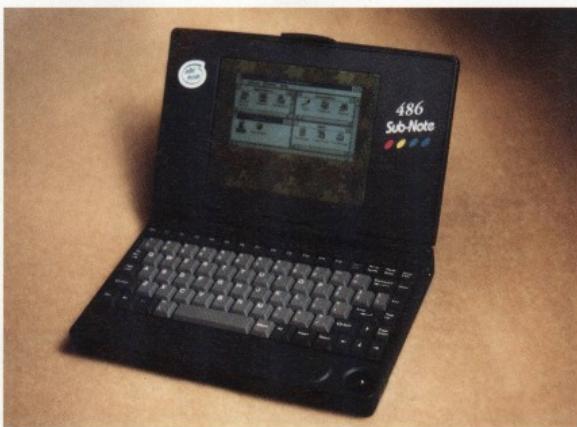
"After saving your data, press F2 to let you enter the Power Management Setup that may suspend any operation. Pressing the 'ESC' key resume the operation to where you left off to which the entire system is still intact."

No, I haven't made any typos! Then, towards the back of the manual which had so far been in English, there are paragraphs and then pages in French. On the positive side, it did have a troubleshooting section and a table of contents (but no index).

Ever-shrinking dimensions

The system is ready to work for you straight out of the box, already loaded with DOS 6.2 and Windows 3.1. Measuring 280mm by 177mm by 37mm, and weighing-in at about 1.8 kg, it's hard to believe the Chicony will weigh anyone down. The 86-key keyboard has a nice feel to it, and the keys have not been squashed together or reduced in size, which happens so often when notebooks are shrunk to subnotebook dimensions. A Microsoft-compatible trackball is positioned at the bottom right-hand corner of the keyboard, with the buttons over on the side of the machine. Left-handed users will find this a nuisance, but probably not more so than many other brands of notebook or subnotebook.

The Chicony's screen is a 640 by 480 FSTN LCD passive matrix colour, measuring 160mm by 120mm, so it's not huge in anyone's language.



There's a nice feel to the Chicony's keyboard, and the keys haven't been shrunk out of sight

I must admit to finding the screen a bit hard to read in an environment of bright, natural lighting. The angle of clear visibility is very narrow, which means that you need to be square on to the screen to have any hope of reading it. Maybe this is an advantage if you want to use the Chicony on the train or bus, and want to keep your work private.

The system has power management functions and a Resume button, which will prolong the time between battery recharges. To test what could be expected from the Chicony's battery, I re-ran the SYSmark93 test which performs non-stop operations on the machine. Therefore, the 1 hour 25 minute life span that I recorded is certainly less than you could normally expect from the Chicony in normal operation — but then again, other machines I've tested in the same way have produced better results.

The deal

For your money, you get the Chicony with a 170Mb hard disk, 4Mb of RAM and an external floppy disk drive, all covered by a two-year

return-to-base warranty on parts and labour. This subnotebook is small and light, reasonably fast and has a good keyboard. If you acknowledge the screen's limitations and don't mind boning up on your schoolbook French, the Chicony is a good buy.

— David Sokol

Chicony 486SX colour subnotebook

PC World Test Centre scores

Performance	Good
Software compatibility	Excellent
Expandability	Very Good
Documentation	Poor
Setup and ease of use	Excellent
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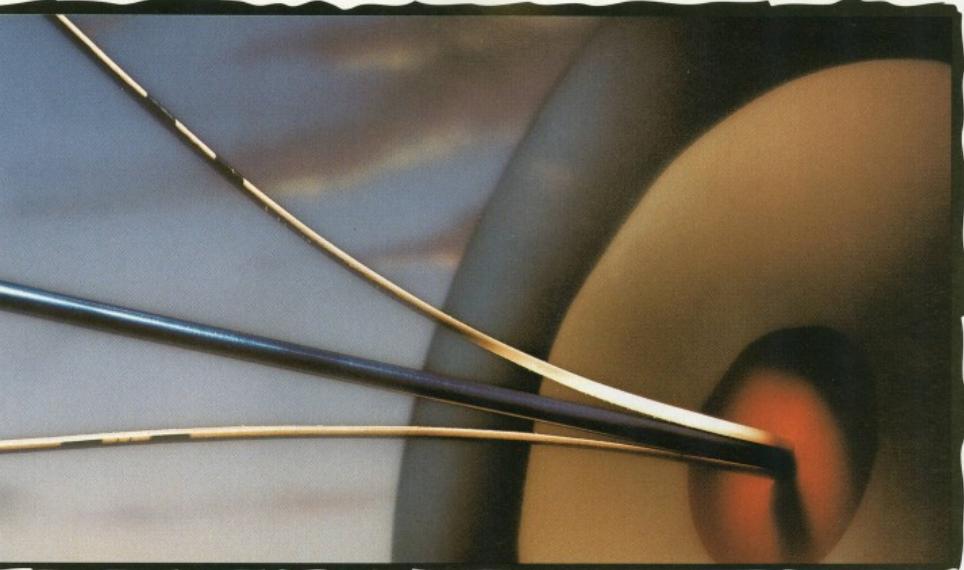
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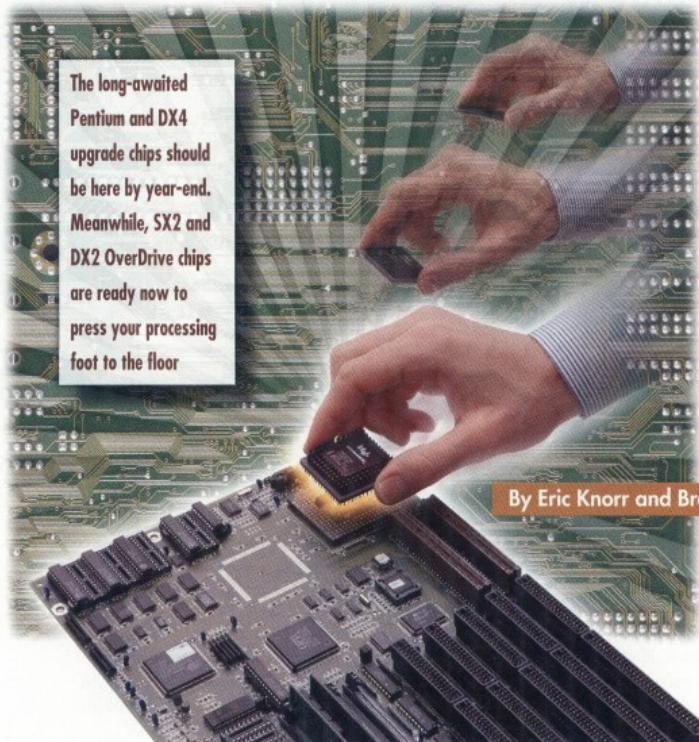
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Jeff Berlin

SHIFTING INTO OVERDRIVE

Owners of 486 systems with "Pentium upgrade" sockets must feel a little like cult members scanning the sky for an alien visitation. They know that something is going to land — but what, exactly, and when?

The sightings have been mostly hearsay until recently, when Intel produced a clearer snapshot of its much-anticipated Pentium OverDrive, a chip designed to let users of PCs with Pentium OverDrive sockets plug in and throttle up to Pentium-like speeds. Due out by the end of this year or early next year, these user-upgradeable Pentium OverDrives supposedly will boost performance by 40 to 70 per cent, depending on the application and the system's original CPU. Drop one into a 66MHz DX2, and our best guess is that you will have the processing power of a 60MHz Pentium.

Meanwhile, an advance party of new 486-class OverDrives is available. Shipping now is Intel's SX2 ▶



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was the main problem, and Intel finally conquered it by adding a small cooling fan to the chip. Contributing to the delay were Intel's desire to incorporate some of the latest technology from its new 90MHz and 100MHz Pentiums into the chip, along with the logistical problem of getting the 64-bit Pentium bus interface to work with the 32-bit 486 bus.

According to Bennett, "The Pentium OverDrive will work in every system with a Pentium OverDrive socket that was designed to our original specification." But Intel's verification program, in which the company tests both new systems

Intel acknowledged that there will be cases in which systems advertised as Pentium upgradable cannot be upgraded

and older PCs that already have the sockets, indicates that a significant number of systems will not make the grade. How many? In early May, Bennett said that the chip will work in "the majority" of existing PCs with Pentium OverDrive sockets. But Intel acknowledged that there will be cases in which systems advertised as Pentium upgradable cannot be upgraded.

"There are, in fact, boards out there that have not been designed to [Intel's specification]," said Bennett.

That's a very different situation from the original OverDrive scheme for 486SX machines, in which an OverDrive socket virtually guaranteed that an OverDrive chip would work.

At press time, Intel had a list of over 450 systems, from more than 40 vendors, verified as compatible with the Pentium OverDrive. However, while many PC vendors have been submitting their recent 486 systems to Intel for an "Intel Verified" stamp of approval for a Pentium upgrade, some are electing not to submit older systems that were advertised as Pentium upgradable. Intel started the verification labs to make sure

upgradable systems will work with future upgrade processors.

Dell Computer and Zeos International won't submit all of the models they advertised as Pentium-ready for Intel's verification. Dell has sent in certain PCs from its OptiPlex line but not from the Dimension line. Zeos has submitted local bus systems and is getting other systems verified, but will not submit older EISA machines. Dell and Zeos guarantee that their systems will be upgradable when the P24T ships.

Compaq is unique among large vendors in that it has not submitted any systems to Intel for verification.



OverDrive, a clock-doubling chip for 25MHz 486SXs that takes upgrade chip pricing to new lows: \$330 list, and less in stores. Sources close to Intel say that by the end of the year you'll be able to buy DX4 OverDrives that run at triple the internal processing speed of either 486SX or 486DX systems operating at 25 or 33MHz. Any of the SX2 or DX4 OverDrives will plug into a standard DX or DX2 socket or an SX OverDrive socket.

Hurry up and wait

When the Pentium OverDrive finally arrives in or near the fourth quarter, two years will have passed since the first DX2 system with a Pentium OverDrive socket hit the market. Much of the wait, according to Intel's US product marketing manager Bob Bennett, will derive from efforts to get the Pentium OverDrive to work in a broad range of systems containing the special socket. Overheating

"We don't need to rely on Intel. [Intel verification] is provided for smaller vendors," said a Compaq representative, who added that the company does its own verification.

Some companies claim that it is not worthwhile to get older systems verified as it costs too much money and they are no longer being marketed. Some say lower-tier vendors will be the source of some of the biggest problems.

"It's the guys that slopped machines together and then tagged them upgradable [that will cause problems]," said Pete Scamardo, a marketing manager at Micron Computer.

Older designs could be a "nightmare", said an engineer at a large motherboard manufacturer, citing potential overheating and electrical current problems resulting from dropping a Pentium-class processor into an older 486 design.

BIOS incompatibilities could also result. A number of vendors on the Intel verification list specifically state that only certain BIOS versions are Pentium compatible.

Continued page 75 ▶

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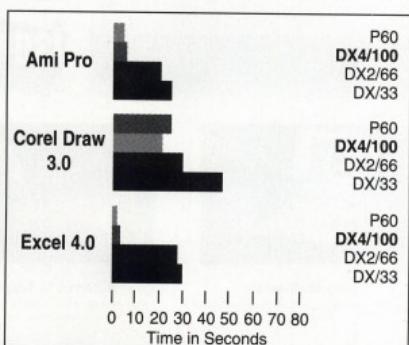
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INTEL OVERDRIVES

performance improvement and the cost isn't much higher than that of an upgrade chip alone.

Davis's calculation may hold true for the Pentium OverDrive, which will probably cost a bundle, but the low end of Intel's line is another story. Designed to double the internal processing speed of 25MHz 486SX systems, the SX2 OverDrive is the first Intel upgrade chip that lacks a maths co-processor, and it's priced accordingly. According to *PC World* benchmarks, you can expect a performance improvement of more than 30 per cent from a chip that sells for under

year's Pentium OverDrive and the next-generation Pentium OverDrive chip that nobody's talking about. Unfortunately, it's not that easy to tell which socket your system has; the best way to find out is to check with your vendor or to get in touch with Intel.

The socket for the future Pentium upgrade can also be found in DX4 systems in a 235-pin configuration. Virtually all new Pentium systems can also accommodate this future Pentium OverDrive chip. Two sockets are designed to receive the chip: one with 273 pins for 60MHz and 66MHz Pentium systems, and

Believe it or not, Intel has released specifications for no fewer than five different types of Pentium OverDrive sockets

\$300 on the street. As long as you don't do CAD or financial and statistical spreadsheet calculations, this is one hot upgrade.

Pentium power and beyond

Intel's most interesting revelations about future upgrades come not from what the company says but from what it does. Believe it or not, Intel has released specifications for no fewer than five different types of Pentium OverDrive sockets. All but one of these — the original 5-volt, 238-pin OverDrive processor socket — will hold one of several next-generation Pentium OverDrives that Intel refuses to discuss, except to say that they will be more powerful than the Pentium OverDrive that's to be released this year.

According to one source that has seen papers on the chip, the next-generation P24T will deliver, compared to the DX4, a 50 per cent increase in integer performance and a 150 per cent increase in floating-point performance.

The hot socket to look for in most new 486-class systems is a 237-pin wonder that can hold any OverDrive processor, including this

one with 320 pins for 90MHz and 100MHz systems.

To further complicate matters, many 90MHz and 100MHz Pentium systems will come with 320-pin sockets that can hold either the next-generation Pentium OverDrive or a second Pentium CPU for multiprocessing.

If you buy a Pentium system with an OverDrive socket, one thing that you probably will not have to worry about is whether a future Pentium OverDrive will work in your machine — adding a faster Pentium to an existing Pentium system should be a smooth upgrade.

How could things get any more complicated? Well, wait until IBM gets into the act. The company's agreement with Cyrix gives IBM the right to sell under the IBM name any chip that IBM manufactures for Cyrix. So far, Cyrix's upgrade chips have all been 386-to-486 offerings (or wimpier), but no-one expects this state of affairs to last, and IBM has made noises recently about the "viability" of the CPU upgrade market. A little competition will do Intel some good — and you, too — by forcing CPU upgrade prices down. ■



From page 72

Others are complaining that it is impossible to determine whether the upgrade chip will work or not because few have seen an actual chip.

Intel's the winner

Although many buyers have "upgradable processor" on their shopper's checklist, the vast majority of business users pass along old machines and buy new ones rather than specifically upgrading CPUs — and Intel wins either way. According to Mark Davis, a computer consultant, most of the users he's talked to "haven't thought much about processor upgrades" and probably don't know whether or not they have a Pentium OverDrive socket.

"If you don't want a new system, the best upgrade is a new motherboard," said Davis; you get more

Act delivers a command performance

Symantec's Windows-based contact manager combines power, ease of use

By Patrick Marshall

Contact managers — software designed primarily for telemarketers who need a way to track phone calls and quickly create standard letters — are slowly evolving to work on the network and integrate with electronic mail.

Act for Windows, which Symantec acquired last year as a part of its purchase of Contact Software International, is no exception. The biggest changes Symantec has made in version 2.0 of its new product are recording locking and support for major e-mail packages. Symantec has also reduced Act's list price from \$599 to \$475 and cleaned up the interface.

Act provides about the best combination of power and ease of use we've seen in a Windows contact manager.

Features

Version 2.0 of Act provides full e-mail integration via ActMail, a built-in front end for popular mail packages. Not only can you attach contact record information to messages, you can also have Act automatically integrate appointments and contact information you receive into your database.

Act also now comes fully net-

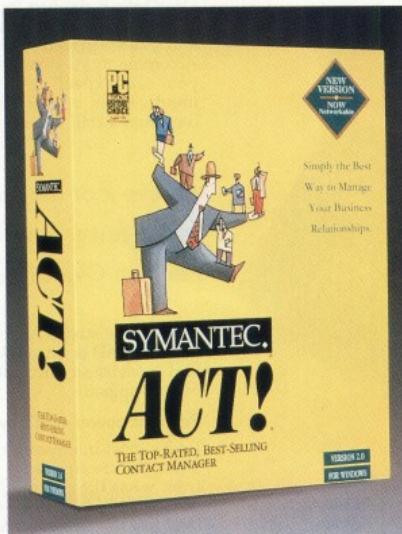
work ready. You can lock records and designate data as public or private.

Although multi-user and e-mail features make Act more attractive for use on a network, it's not a group scheduler. It lacks the classic meeting negotiation functionality offered by products such as OnTime.

Symantec has given Act 2.0 a fresh look with a new status bar, more attractive icons and a modified menu structure. By clicking on the appropriate icon in Act's colourful and well-designed toolbar, you can quickly summon any of the program's many schedule views. Icons are also available for checking and creating e-mail.

Act's status panel, which appears to the left of the contact record area, has been modestly redesigned. The new status panel still shows the total number of records and provides buttons for navigating. It also now displays three icons boxes that show whether there are schedule items, notes, or history items attached to the current record.

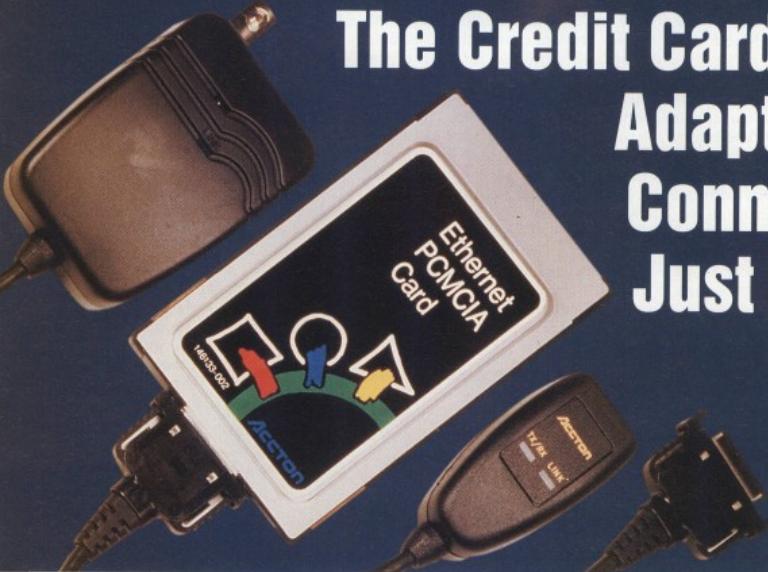
Otherwise, Act remains largely unchanged from the previous version. It continues to be the most easy to use of the Windows contact managers, with dozens of user-definable fields and the best search tools of any product in this category we've examined. It is also the only Windows ▶



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contact manager that can share data between DOS and Macintosh platforms.

The program's anchor is still the contact record, which offers 10 different layouts. Each layout features a different arrangement and selection of data fields. The Contact 1 layout, for example, displays 36 data fields, including name, company, address, phone number, and nine user-defined fields. The Rotary Index 1 layout, by comparison, displays only 18 fields, including the contact's name, company, phone number and four user-definable fields.

We were surprised to find that Symantec hasn't fixed some of Act's limitations. You still can't rearrange contact database layouts; instead, Symantec provides a free Layout Editor on its CompuServe forum that you can download and use to modify contact record layouts. You also can't generate a report of all of your calls; call logs appear within the contact records of the person you called. The only way to get information on all calls is to print out all contact records.

Another pet peeve of ours: because the field labels and the data you enter use the same font, distinguishing between them can be somewhat difficult.

Performance

Record management: Act provides strong record management. For scoring this category, we looked at the number and variety of data fields, the degree of control over layout and field definition, and the effectiveness of the contact history at tracking record changes.

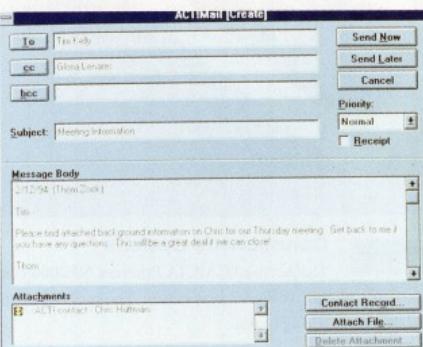
Symantec did not tinker with Act's basic data structure. You can view your data via 10 different record formats, with a total of 75 data fields per record possible (although

you can't see all 75 fields in any one view). You can change the label, data type, and attributes for most of the fields. For the 15 user-definable fields, you can also select from among eight field types: character, uppercase, date, phone number, numeric, currency, 0 to 9 only, and time.

The only limitation is that you cannot modify the length of predefined fields (which vary from four to 75 characters) or change their layout in the record without the Layout Editor.

The program includes an auto-dialler, which you summon by click-

**ActMail lets
you send
records to
other Act users
via e-mail
software**



ing on the telephone icon in the toolbar. When you do so, Act logs an entry in the contact's history. Information regarding appointments, letters sent, or changes to the contact's record appear there, too.

Only the fact that you must download a Layout Editor to change contact record layouts prevents us from giving Act a higher score in this category. We rate record management *Very Good*.

Searching: We tested Act's search tools by searching our contact database to retrieve records that contained a specified character string; customising searches using field-delimited, wild-card character (* and ?), Boolean operator, and multiple-field options; and sorting our search results.

Act's search tools continue to be powerful and flexible. The program gives you three ways to search, each with the option to use DOS wild-card characters: lookups, keywords and query-by-form.

Lookup searches work well for quickly finding a particular entry based on the contents of a single field. You click on the Lookup menu and select the field to search — for example, Company, First Name, Last Name or City — then enter the search string in the box that pops up. Act quickly returns the matching records.

Keyword searches let you find a particular character string wherever it exists in the database. Act searches across all data and note fields — a process that can take some time to complete. You can also conduct a search based on priorities to retrieve activity items.

A query-by-form search allows you to set the search criteria in multiple fields. You must select Other from the Lookup menu and then enter the criteria into the blank record form that pops up. Act finds all matching records. If you require a still more refined query, the SmartQuery utility lets you combine multiple terms in a single field using Boolean operators. For numeric fields, you can also define value ranges and enter logical operators. You can save queries and add them to the Custom menu.

You have to go through many menu selections to access the search functions, especially SmartQuery. Fortunately, you can add commonly used searches to the menu or attach them as a macro to an icon on the toolbar.

We rate searching *Excellent*. **Scheduling and telephone:** As before, Act is strong in scheduling and integrating itself with your telephone ▶



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work. To score this category, we evaluated the scope of scheduling display options, Act's auto-dialling capabilities, group-scheduling tools, and any extras, such as snooze alarms, prioritised to-do lists, and time lines, as well as weekly and monthly displays of schedules.

Act 2.0 offers attractively designed daily, weekly and monthly views of appointments and tasks. Creating an appointment or scheduling a call is as easy as double-clicking on the time slot where you want the item placed and then filling in the resulting dialogue box.

You can specify scheduled activities as meetings, calls or todos. (Todos appear in a separate box to the right of the calendar.) You indicate duration and attach the item to a person in your contact database.

Rescheduling appointments is also simple using drag-and-drop techniques, or you can call up the activity's detail screen and change times or dates manually.

The schedule is well integrated with the contact database. Once you've attached an item to a contact, double-clicking on the item will take you directly to the contact's record. You can work in the other direction as well, and summon a list of all activities attached to the current record.

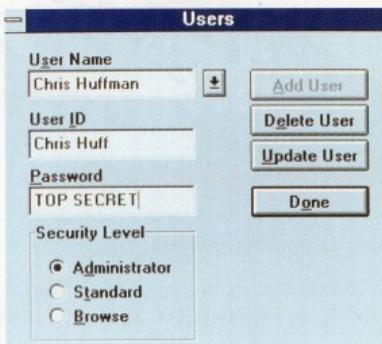
Many contact managers fail to provide even simple alarms. Act for Windows supplies a powerful set of scheduling tools, including alarms with a snooze feature, lookup tables for quickly scheduling tools, including alarms with a snooze feature, lookup tables for quickly scheduling a call at a future time, conflict checking of appointments and easy entry of recurring appointments.

Act's telephone tools are also strong. Calls you make using Act's dialler are automatically logged into the contact history of the appropriate

person. And you can measure the duration of calls by activating a timer, though unlike many personal information manager (PIM) products, Act does not trip the timer automatically.

You'll also find a lookup table in the phone call record that pops up when you dial, so you can enter a key word describing what the call was about. Unfortunately, there's no room for taking longer notes; once you've connected to the person, you have to close the phone call record and enter notes in the contact record.

Act 2.0 lets you decide who has access to contact data



Missing in Act is a central phone log. You can view all phone calls made to a given contact, but there is no provision for viewing or reporting all phone calls you placed within a specified time period. Nevertheless, we rate scheduling and telephone *Very Good*.

Document creation: Act makes it relatively easy to create, edit and merge form letters. It also integrates well with external Windows word processing programs. However, Symantec has done nothing to change the fact that Act lacks the capabilities to log externally created documents.

Act's surprisingly strong word processing includes a fine selection of formatting tools, a spelling checker, and a style sheet facility for saving templates. The product also

ships with a handful of ready-made document templates.

When you select a template from a contact record, the program automatically inserts data from the record's files into the appropriate places in the document.

Act makes it easy to send a document to a group of contacts. You assemble the group (using the Lookup command) and call up the document. Act will create a copy for each contact in the group.

Act's word processor is not capable of some high-end word processing procedures, such as snaking columns or adjusting character kerning. You can shell out to your Windows word processor for these tasks, but Act does not log the documents you create in the external word processor into the appropriate contact histories.

As a result, we can rate document creation only *Satisfactory*.

Reporting: Act for Windows provides a wide variety of predefined report formats, including several new ones. You can modify most of the templates in Act's word processor and even save them as new report types on the Report menu.

You can print calendars and contacts in popular organiser formats, including those for Franklin Day Planner, DayTimer, DayRunner and FiloFax. You cannot modify calendar report layouts, however.

The program also provides templates for printing a wide variety of mailing labels, envelopes and index cards.

The fax links are stronger than those in the previous version. You can still work with any Windows fax software that you can configure to appear as a print driver option. Act also retains its integration with Delrina's WinFax Pro — you can share phone books between the programs through DDE links. New to ▶

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this version is the capability to merge faxes (sometimes called broadcast faxing), a process in which Act automatically addresses and sends faxes to multiple recipients in one fell swoop.

We rate reporting *Very Good*.

File management: Act has improved in file management and data sharing. Act's new record-locking feature lets multiple users safely access the same Act database simultaneously. Also, you can mark specific activities as private to keep other users on the network from viewing or changing them (or both).

In addition to multi-user access, the new ActMail interface lets you send and receive e-mail messages using Microsoft Mail, cc:Mail and CompuServe from within Act. Even better, you can attach Act data — records, appointments and so on — to messages and Act will automatically merge this information into the recipient's contact record database.

Act's import and export tools have also been enhanced. In addition to its basic support for ASCII and dBase files, Act can now also handle dBase memory fields and Q&A files.

As was true in the previous version, Act 2.0 provides a utility for merging and reconciling data in two databases.

File management earns a score of *Excellent*.

Other features

Act provides a few extra features we didn't test. For instance, it comes with password protection for databases. Also, you can use Act's macro recorder to create automated procedures and then associate a macro with an icon and add it to the toolbar.

Act is also available on DOS and Macintosh platforms, and you can share data easily between these versions.

We rate other features *Good*.

Documentation

Symantec has fully revamped Act's documentation. The users' guide is well written, liberally illustrated and thoroughly indexed. The manual also contains a helpful tutorial chapter,

Act is easy to learn, especially considering the flexibility and power it provides

which you use with the included sample database.

Act's searchable on-line help features hypertext links, which make it easy to navigate the concise, clearly written explanations. You can access context-sensitive help by pressing Shift-F1 and then clicking the modified cursor (an arrow with a question mark) on the on-screen element you need help with.

The program's on-screen cues have been improved. We still found some quirky menu organisation, though. For example, you can't access the Smart-Query utility without first performing a query-by-form and then moving through two layers of menus. Overall, however, we rate documentation *Very Good*.

Ease of learning

Act is easy to learn, especially considering the flexibility and power it provides. The interface and the dialogue boxes are intelligently designed. In addition, the manual's tutorial section combines with the tutorial database to provide a solid introduction to the program's features.

Some of the icons on Act's old toolbar were difficult to interpret. The icons on the newly designed toolbar are generally more intuitive.

The program would still benefit, however, from an on-screen hint line or Balloon Help to identify various program elements and their functions. We rate ease of learning *Very Good*.

Ease of use

Act provides a number of tools that make it easier to use. The new centralised Preferences utility and modifiable toolbar are helpful. So are the pop-up lists for data entry. Macros let you automate procedures that you carry out regularly.

Act's limitations may get in your way, though. You can't change field lengths or screen fonts, and you must have the Layout Editor to change

field layouts. You can't add an icon that will bring up a blank search dialogue box, only a predefined set of search criteria. Nor can you assemble a log that displays all of your phone calls in one place; calls display only with their associated contact log.

Overall, however, Act is a breeze to navigate.

We rate ease of use *Very Good*.

Support

Support policies: Symantec offers free technical support from 9am to 6pm, Monday to Friday. We rate support policies *Good*.

Value

Act for Windows, version 2.0 competes well with other contact managers in both price and features.

A single-user version sells for \$475, and a four-user network pack for \$1,350.

Act is flexible, easy to learn, and offers special workgroup tools — most notably its ActMail interface to popular e-mail packages.

We rate value *Very Good*. ■

ACT for Windows 2.0

Windows-based contact manager

Pros: Network ready; e-mail data transfers; customisable data fields; strong searching tools.

Cons: Record layout is unmodifiable; incomplete integration with external word processors.

Summary: With version 2.0, Act for Windows is now an effective workgroup contact manager. The program provides the strongest overall feature set of any Windows contact manager, in a package that's easy to learn and use.

Price: \$475

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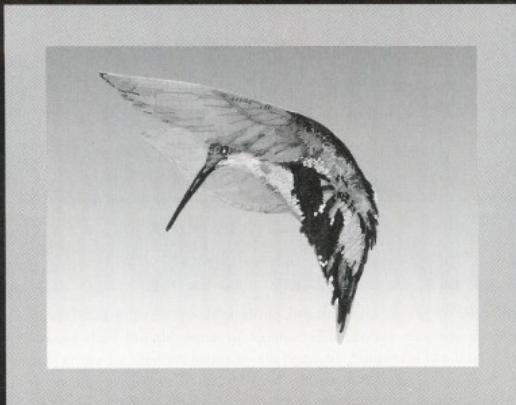
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Practice makes quicker still

There's more power for personal and business accounting as Quicken accelerates to version 3.0, and QuickTAX makes the tax chore easier

By Jan Wikström

A lot of us do our accounting with a spreadsheet — and if we're only concerned with the main items and have the time to do it by hand, that's good enough. The output side is easy, as most spreadsheets let you create reports and pretty charts at the drop of the proverbial hat. Entering 50 or a 100 small transactions each week is a different matter; this is where a specialised accounting program can do the job much quicker by automating much of the process. This also helps to prevent mistakes.

Quicken has always been a favourite of mine in this area, chiefly because keeping the books for my tiny business is something I prefer to spend as little time and effort on as possible. Quicken has some extremely fast and easy input routines — I punch in my 40-odd entries and get a weekly profit report in half an hour.

Easy repeats

The main reason for the speed is the ability to memorise entries for people with which you know you'll do repeat business. When you have completed an entry for Samovar Products, say, you press **<Ctrl>+M** to add that entry to a special list. The

next time you buy a consignment of those delicious strudels and start entering the vendor name, "Samovar Products" appears as soon as you press **S** (because Samovar is first in the list under S). If you now press **<Tab>**, the memorised entry appears. If it's a standing order and this consignment is the same as the last, just press **<Enter>** or click on the Record button and the entry is done; if it's a different consignment, you merely change the amount and memo details first.

Yeah, fine, but what if the entry you want to make is for Sunburst Regency Foods? You just enter the second letter, the memorised Sunburst entry appears and you process it as needed. I never need to enter more than three letters of any name. If there are two memorised entries where the names differ only near the end, you could have to type in nearly the whole name, but there's a shortcut out of that. You simply use the plus and minus keys, which bring up the entries before and after the one showing.

The same keys make it easy to set the date for an entry. For instance, if the last entry you made was 29/6 and the next is 2/7, you don't need to retype the date but just press the plus key three times. ▶

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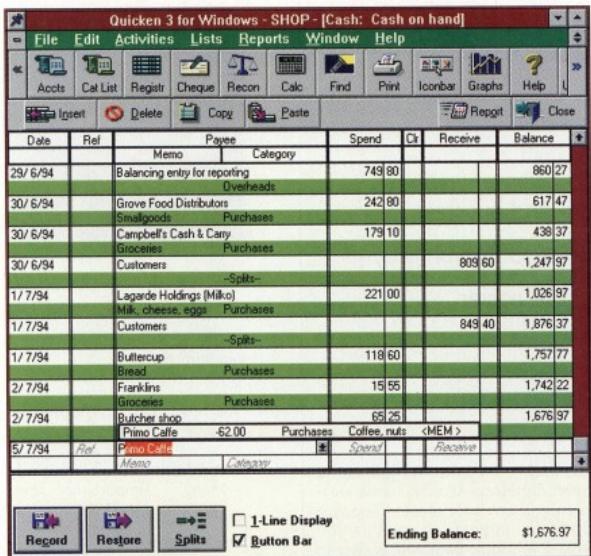


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REVIEW

QUICKEN 3.0 AND QUICKTAX



An entry is being made. The recorded entry for Primo Caffe has just come up, in a separate field to indicate that it has yet to be accepted. Note the button bars at the top: the program window has a large, easily configurable one, and the transaction entry window has a smaller one.

Pop-up everything

Version 3.0 has improved on this already super-easy process. If the date difference is too big to make the plus and minus buttons practical, you can now click a small arrow in the date field and pop-up a mini-calendar, where one click changes the month and another selects the day. The same principle has been applied to the name field, where a click now pops up a list box of memorised names for easy selection without typing anything.

The new version has also made other features easier to use. There is now a single dialogue box for selecting and customising reports, and the payment/event reminder is now set up graphically with a wall calendar metaphor. I found this not only easier to use than the old

dialogue box, but also a great aid to getting an overview of things to come.

While Quicken was originally intended for personal financial management, I find it excellent for very small businesses, mainly because of its great ease of use. It doesn't have built-in invoicing, but there is an add-on package to manage that. There is also no specific payroll module, so this is something I manage by hand. The "splits" feature — where you can assign parts of a transaction to different categories — comes in handy here. It lets me enter gross wages for an employee as the main amount and split it into net wages, PAYE tax and allowances — and Quicken checks my addition.

Strong features for personal

financial management (and improved in version 3.0) are the investment portfolio manager, financial planner and loan and amortisation tracker. As we get on, we tend to put a few eggs in this basket and a few in that — a couple of savings/investment accounts, some bonds, a super plan, a few modest shares — which can get a little complicated to keep track of. It's even more complicated to figure out where it's best to put whatever additional savings one might scrounge, which is where I find Quicken a great help. Of course, Quicken can still print cheques, and reconcile bank and credit card statements.

As before, Quicken is adapted to Australian conditions including the Australian taxation system. This version even has the superannuation contribution tax rate pre-set.

Speaking of tax, it's that time of year again. Quicken has a system of earmarking categories for taxation purposes, which works in with the taxation system. This makes it easy to get a report showing the balances of all items relevant to tax, which is great for income tax returns.

Return your tax

Even better, you can get into Quicken's stablemate, QuickTAX. This program helps you fill in the standard personal income tax return form, either from Quicken data or from hand-fed information. This form is approved by the Australian Taxation Office, and can be printed out on paper or saved to a disk for electronic lodgment. Intuit Australia provides an electronic lodgment service (as does Australia Post) and even supplies an addressed envelope for this. Either way, the electronic lodgment fee is \$20.

This is, of course, basically a simple function but Intuit has done a good job of adding explanations (in the form of voluminous context-sensitive help) and making the interface manageable. While the interview function is running, the form is displayed but can't be altered,

Continued page 97 ▶

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Taking out the garbage

Keeping Windows neat and tidy can be a real chore, but there is hired help

The basic idea of Windows is a very clever one: instead of making every application program do everything for itself, you have a set of standard interface routines, memory management utilities and so on, which can be used by any application program. This is mainly done by organising the routines into collections called libraries. Because they are linked to each application program as it is loaded into memory, they are called Dynamic Linking Libraries and you recognise them because the file type is DLL. Together, the DLLs and other support items form the Windows Application Programming Interface (API).

So far, so wonderful. This saves programmers from reinventing the square wheel over and over, and

saves space on your hard disk. A bigger benefit to the end-user is that we have a totally standardised interface and all programs obey the same controls.

Theory is one thing ...

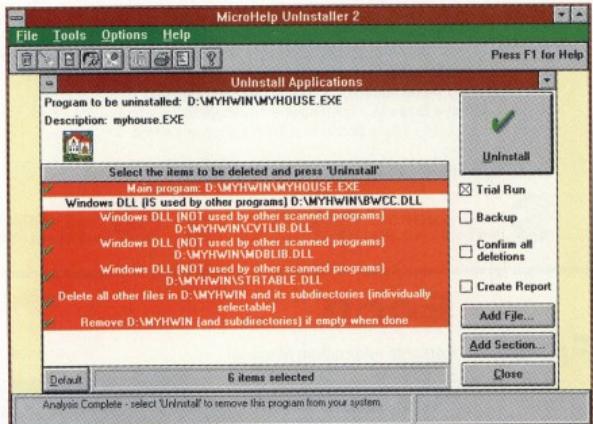
In theory, that is. What happens in reality is that a lot of people want their programs to look snazzier than the competition and so include their own DLLs anyway. Borland is one prominent culprit — applications created with Borland languages or by Borland itself are easily recognisable by their particular style of colourful buttons with icons instead of the standard Windows text buttons.

The Windows system is also handy when you want a program to do something special, such as run videos. Instead of building those routines right into the program, you add a special DLL or two. If you later want another application to have the same talents, you can simply include those DLLs.

As a result of all this, Windows applications usually consist of half-a-dozen files (but the sky's the limit) which are plunked down on your system wherever the programmer thinks is most suitable. Some DLLs are located in the program directory (or a subdirectory), while some are in the WINDOWS directory. The WINDOWS\SYSTEM directory is popular, too.

In itself, that's all right: it's not tidy, but it works (as long as there aren't two DLLs with the same name, but that's another article). Where this free-range file arrangement becomes a jolly nuisance is when you want to get rid of a program that has outlived its usefulness. It's a very tricky and tedious process to go through and study every DLL to find the ones you want to get rid of — on my system, there are 427 DLLs.

And then, of course, practically every application makes changes to AUTOEXEC.BAT and WIN.INI as it



This is the type of information Uninstaller will give you when you select an unwanted application to be removed. The unselected library is shown as shared by others, which it isn't; its location in the MYHWIN directory gives that away. The reason it was picked up as shared is simply that the same library was installed by other programs in two other directories. If you want to confirm such a case, click the button with two heads on it, which starts a search for duplicated files

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sets itself up with fonts, file associations, OLE parameters and such.

Putting the broom through your system

Enter the uninstaller program. I've looked at two of them: Microhelp's Uninstaller 2.0 and shareware utility Rosenthal Uninstall. I hope I won't confuse you writing about two such similarly-named programs — I'm confused enough myself.

The two programs approach the task from different directions. Uninstaller 2.0 analyses existing files and tries to sort out which belong where, while the Rosenthal program records what is on your system before you install a given application and lets you undo all changes and delete all files added by the program by simply comparing before and after. Both are valid methods and both have problems.

Microhelp Uninstaller 2.0 is by far the more ambitious program of the two, and has the great advantage that you can apply it successfully when the system is already clogged with leftovers from a dozen deleted programs. Uninstaller does this by looking inside the program you want to delete and locating all DLLs, INIs, overlays and so on called by the program.

The program will do more than just uninstall selected applications; it will also locate orphans — programs that have been installed but don't have an icon in a Windows Program Manager group — and duplicated files. In addition, it will put the finger on unneeded system files and lets you edit or delete all INI files on the system. As part of the unwanted program removal, Uninstaller also lets you delete bits of WIN.INI, SYSTEM.INI and AUTOEXEC.BAT.

A certain amount of caution needs to be exercised, mainly with DLL files. This is because they can be used by several programs; a typical example is VBRUN300.DLL, which is used by all programs created with Visual Basic 3.0 and is usually installed over and over, each installation overwriting the previous.

Uninstaller warns you if a DLL could be used by other applications

and you have to use your own judgment. This may sound a bit tricky, but there's one thing that cuts the anxiety loading a bit: only DLLs located in the WINDOWS and WINDOWS\SYSTEM directories can be shared; anything else picked up by Uninstaller 2.0 can be deleted with confidence.

If you don't mind me expanding on this a bit, it's common to find remnants of installation programs in the root and DOS directories, or even in leftover temporary directories of their own. Uninstaller 2.0 will pick them up if you run the orphan finder. If you run a shell other than standard Windows, this will be a bit tedious: PC-Tools and Norton

protection), data and configuration files resulting from other programs, and willy-nilly deletes these along with the program you want to get rid of. It might be useable if you try out a program and immediately want to get rid of it, but anything that you use for a few hours would cause too many innocent bystander files to be destroyed.

Normally, I wouldn't bother to review a relatively useless program like this, but the names are so similar that I think it's important to warn that this product is not the same as Microhelp's Uninstaller.

Mind you, Uninstaller does have weaknesses, too. The main one is, of course, the often inconclusive identi-

It might be useable if you try out a program and immediately want to get rid of it

Desktop, to take the two leaders, don't respond fully to DDE calls and so you'll have to go through your directories and manually identify programs in use.

The SmartLinks feature then pins down all DLLs, VBXs etc that aren't used by current programs. If there is still some uncertainty, you can look inside the remnants with a text editor (Windows Write will do fine, but don't convert the file when Write offers this option) and identify them by their copyright statements. Also, sometimes the remnants are given away by their file names.

Out with the new

Rosenthal's Uninstall, in spite of its confusingly similar name, is in chalk and cheese country. When you tell it to, it runs through your system and makes a list of all files. The next time you run it, it lists all files that have been added since it was last run and allows you to delete the lot, which rather limits its usefulness.

The problem is that it picks up any new and changed files, including housekeeping (such as undelete

fication of libraries, but I've also noted a couple of incorrect suggestions about WIN.INI sections. However, as long as you watch what Uninstaller is doing and think about program and vendor names, it produces a highly useful result. I've used it myself for some months now, and wouldn't be without it. I apply a simple rule to the doubtful cases: when in doubt, don't delete.

— Jan Wikström

Uninstallers

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eg. Cost to play Special 5/6 System 10	\$6.20	\$7.90	\$7.90
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eg. Cost to play Special 4/6 System 16	\$16.00	No	No
eg. Cost to play Special 4/6 System 18	\$29.60	No	No
eg. Cost to play Special 4/6 System 20	\$51.70	No	No
PRINTS LottoPool Coupons, All Printers	Yes	1 Printer	No
*Autocompletion Pattern Predictor chooses the numbers for you	Yes	No	No
Previous Draw Game Reduction	Yes	No	No
Bell curve reduction	Yes	No	No
Odds/Evens reduction	Yes	No	No
Consecutive number reduction	Yes	No	No
Boxing reduction	Yes	No	No
Mouse Support	Yes	No	No
Mouse Resizable Windows	Yes	No	No
Ball Curve Analyses	Yes	No	No
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Speed can be deceptive

The TravelPorte FAST portable fax modem is certainly worth having — for the right reasons

By Neale Morison

The TravelPorte FAST is a high-end portable modem that uses the new 28,800bit/sec V.Fast standard. V.Fast is not a globally accepted standard as yet, but according to Microcom the modem will talk at this speed not only to other Microcom V.Fast modems but also to any V.Fast modems based on the Rockwell chip set.

Because the standard is not established and the modem is expensive, it will appeal only to purchasers who need the speed for a specific purpose, and who can buy two iden-

tical V.Fast modems, one for each end of the line. Even so, you can't guarantee the speed if you're running over standard Telecom lines — noise on the line can easily reduce your data transmission rate to 9,600bit/sec or lower.

Microcom is new on the Australian scene but has been around since 1980 in the US. It is the company behind the MNP (Microcom Networking Protocol) family of de facto standards, which provides a range of data compression and error correction features.

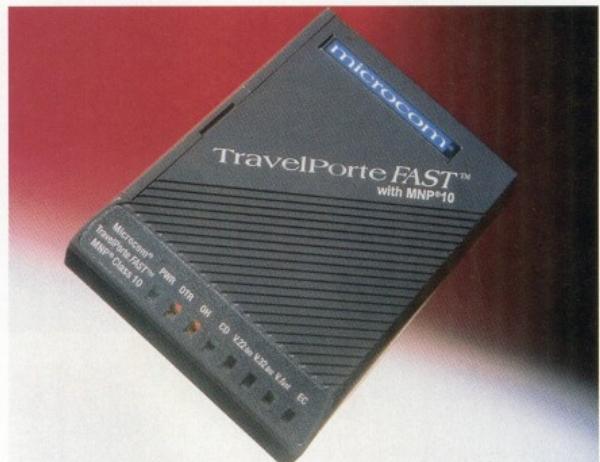
Any modem review has to have some discussion of modem standards, because modems only talk successfully to each other if the respective manufacturers have implemented an agreed standard in the same way. See the box on page 96 for the inevitable list of modem standards.

V.Fast should mean very fast

Because the TravelPorte is a new modem, there may be difficulty finding drivers to implement all its features, and tests indicated that simply using the standard Hayes command set doesn't guarantee reliable connections. If your modem communications software has a Microcom QX modem driver, it should work with TravelPorte FAST, according to Microcom officials in Sydney.

In tests attempting to log-on to a variety of bulletin boards and other services, the TravelPorte was successful using Hayes commands and running at 2,400bit/sec. However, when it was set to 9,600bit/sec it failed to make connections, which appeared to be because the modem attempted to connect at its highest speed and then failed to make connections as it successively dropped back to slower speeds. The result was that, unless connecting to another V.Fast modem, the maximum speed of this modem was effectively 2,400bit/sec.

It is possible that you can achieve better results by experimenting with modem initialisation strings, but the documentation, while thorough, didn't provide the answer to this one. ▶



The TravelPorte FAST is small enough to fit in your pocket. Microcom also makes a desktop version, the DeskPorte FAST

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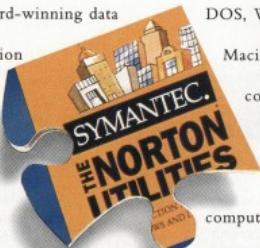
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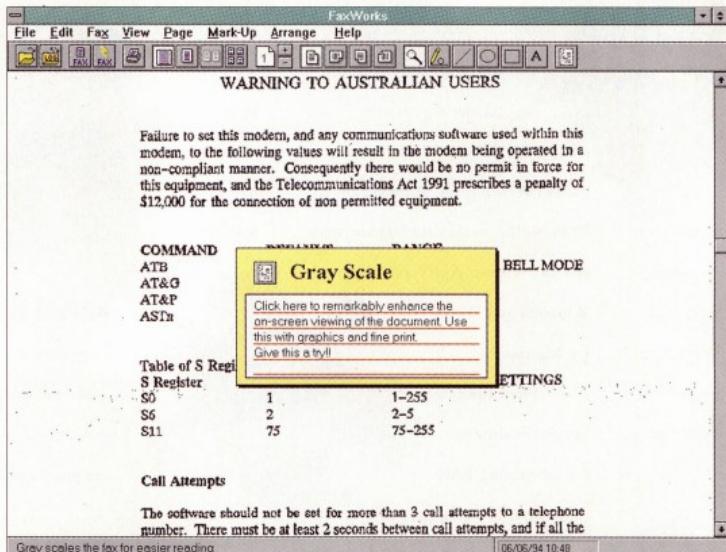
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**MICROCOM TRAVELPORTE
FAST MODEM**

The first TravelPorte provided for review inexplicably failed during testing. The second worked throughout tests, but demonstrated the same problems as the first in connecting at rates higher than 2,400bit/sec to modems other than similar Microcom V.Fast devices.

The TravelPorte did make reliable 28,800bit/sec connections when dialling up another Microcom FAST modem. Talking to a bulletin board at this speed is impressive, with screens full of characters appearing in the blink of an eye.

However, downloading test files using X modem protocol indicated an effective transmission rate lower than 9,600bit/sec. A 170K file took about five minutes, giving an effective rate of just over 8,000bit/sec.

Downloading the same file with a 19,200bit/sec connection gave an effective rate below 6,000bit/sec. By comparison, a test download using 2,400bit/sec gave an effective rate of over 2,400bit/sec.

The cost of this modem is only justified if you get the data transmis-

sion rate you pay for, and that can't be guaranteed unless you're fortunate enough to have excellent phone lines from one side of the connection to the other.

Parallel thinking

Microcom has provided a parallel port connector and driver to ingeniously solve the question of how your computer can send data to the TravelPorte at the necessary speed. You install the driver using the Windows Control Panel, and then in the setup specify which serial port you are redirecting to a parallel port. This system works, and with a 4-bit parallel port connection, the data transfer rate was sufficiently high. It's a good solution for portable computers, which don't have their parallel ports permanently connected to anything. However, there may be contention if you're using a mouse connected to your portable computer's only serial port.

If you're using this solution on a desktop you'll permanently use up two ports, unless you want to plug

The fax software includes a viewer with button-bar help, all angles of rotation, various degrees of zoom and an enhancement feature that improves fax legibility

and unplug them and reset the serial port every time you use them. If you've got room and spare interrupts, you can purchase another input/output card for about \$40.

If you don't want to do it this way, there's a standard serial port connector and cable provided. It operates up to 19,200bit/sec, but doesn't appear reliable beyond that.

There may be a problem with dropping characters if you don't have a high-speed input-output card, that uses 16550 UART (Universal Asynchronous Receiver Transmitter) chips instead of the 8250 UARTs provided on standard low-cost input-output cards. If you want to know which ones you have, run the Microsoft Diagnostics program (MSD) that comes with DOS these days, and select the COM port information option.

Full-featured fax

The fax side of the modem worked reliably using the supplied software, FaxWorks for Windows. It smoothly ▶

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14,400 bps FaxModem

CCITT V.32bis, Group III fax

V.42 error control, V.42bis data compression



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PCW 8/94

**MICROCOM TRAVELPORTE
FAST MODEM****FaxWorks MD****Modem Identification**

Comm Port	1
Modem attached?	Yes
Phone line attached?	Yes
Modem type	Class 1
Max fax send	14400
Max fax receive	14400
Manufacturer ID	TravelPorte V.FC



Microcom provides a diagnostics utility that checks out the modem and fax features

**Microcom TravelPorte
FAST modem**

The following specifications are provided by the manufacturer

Data

V.Fast: 28,800bit/sec
MNP 10 (includes multiple connection attempts, negotiated speed upshifts, dynamic speed upshifts and downshifts, dynamic transmit level adjustment, and V.42bis data compression)

Maximum serial port speed:

115,200bit/sec

Compatibility: Supports Hayes SmartModem AT command set

Auto-answer using any of the following protocols:

V.Fast	28,800bit/sec (proposed standard)
V.32bis	14,400bit/sec, 12,000bit/sec, 7,200bit/sec
V.32	9,600bit/sec, 4,800bit/sec
V.22bis	2,400bit/sec full duplex
V.22	1,200bit/sec, 600bit/sec full duplex
V.21	300bit/sec
V.23	split speed (1,200bit/sec transmit, 750bit/sec receive), V.23 half duplex
Bell 212A	1,200bit/sec full duplex
Bell 103	300bit/sec full duplex

Fax**Class 1 Fax**

maximum fax send 14,400bit/sec
maximum fax receive 14,400bit/sec

Note that some of the flexibility of this modem has been reduced to achieve Austel approval.

For example, the modem's transmit level is permanently fixed at -10dBm.

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sent faxes, both directly from the FaxWorks software and using the FaxWorks printer driver from the Windows Print List.

It received faxes successfully, and the fax viewer had all the features for scaling, zooming and enhancing the fax image. The TravelPorte is a Class 1 fax, but for unidentified reasons didn't work successfully with other fax software, such as WinFax Lite.

FaxWorks has plenty of nice features. A utility automatically checks the modem type, the class of fax, the phone line and the manufacturer, so you can ensure that full communication is established before you attempt to send a fax. It allows for complete fax cover page and banner customisation.

No communications software comes with the modem, however, and this is an omission in view of the difficulty in finding other communications software with the appropriate drivers.

For special occasions

This is a modem with a tremendous range of features. It supports all protocols up to and including V.Fast, and, in addition to the Hayes command set, has a huge range of commands to dynamically control its features. It provides two levels of security for remote access, including

dial-back security that can return a call on a number supplied by the caller.

This is useful if you want to use the modem as a bulletin board or for remote PC access. You can also have multiple-user profiles, and there are features for automatic log-on and cellular network operation. Something that would be very handy is a dedicated communications program to make it easy to access all these features.

The Microcom TravelPorte FAST is a modem for special purposes. If you want a remote connection to an office computer, placing a Microcom V.Fast at either end of the line will give you a high-speed connection, depending always on your phone lines.

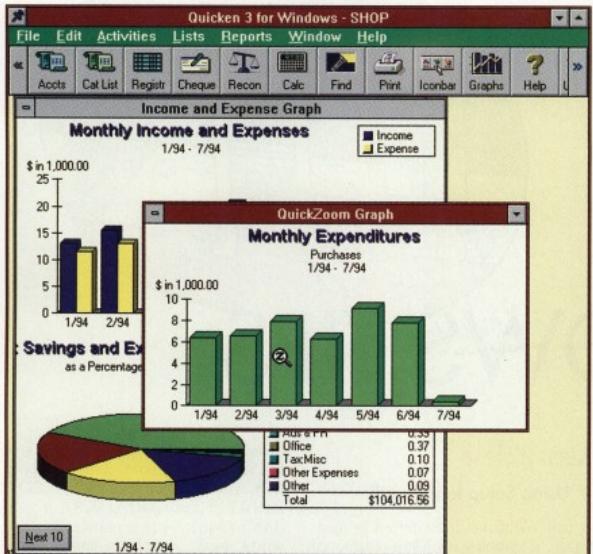
It may also be good as a bulletin board modem, although no tests were performed to determine success when a variety of modems tried to connect to it.

It provides reliable, fast fax facilities, and it's very light and small (about the size of a cigarette pack, if I can say that without creating unhealthy connotations).

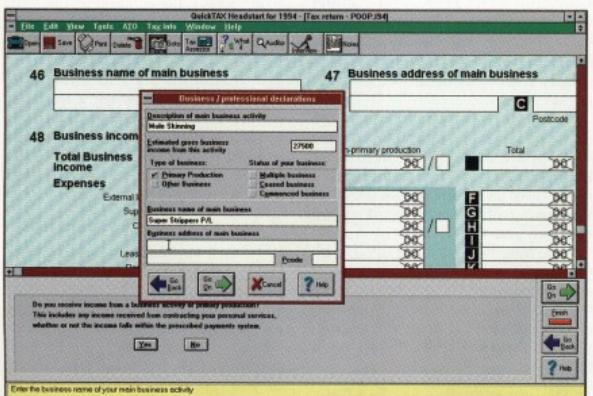
However, bad connections and slow modems at the other end remove the speed advantages of going to V.Fast, if all you want is a portable fax modem at a practical high speed. ■

REVIEW

QUICKEN 3.0 AND QUICKTAX



The graphics and reporting side is great for 'finding out why'. The magnifying-glass cursor with a Z in it means that a left double-click on an item will drill down one level. The green column chart comes from double-clicking on the green pie sector, and if you double-click on one column it will pop up the list of entries for that category in that month



The working face of QuickTAX is a lot easier to live with than the paper form, partly because of the explanations that appear in the status bar at the bottom, and partly because of the 'interview' macro which guides you through step-by-step

From page 86

but afterwards you can edit the data in two ways. Some fields can simply be selected and written to, such as the name information, while fields involved in calculations can be accessed by double-clicking their titles, which opens the interview function at the relevant point.

QuickTAX adds some very helpful functions. There's an audit function that alerts you if your return has a fault that will attract a Taxation Office audit, and a tax assessor that calculates your tax or rebate. There is also a "what-if" function that lets you try different strategies for best results.

I was impressed by the expert knowledge that is built into QuickTAX; not only can the program do such chores as calculating any capital gains tax you may be liable for, but it can also decide such things as whether you should pay provisional tax.

I did stumble across one thing where QuickTAX let me down: when the otherwise clear interview module came to deductions for superannuation contributions, it asked a misleading question that made me select the wrong option, which would have cost me over \$800 in extra tax. The question "Are you self-employed?" would have eliminated the problem.

Apart from that, QuickTAX struck me as a very useful product indeed. ■

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Quicken 3.0 is just about all you need for personal and small business accounting, and QuickTAX certainly helps to get your tax return done

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QuickTAX

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45 WINDOWS TIPS

What's this, another collection of Windows tips? How many more could there be? Plenty. *PC World* has been publishing tips for Windows 3.1 for what seems like eons, but we're still uncovering new goodies. And so we give you the following 45 tips: some are for Windows veterans, others are strictly for novices (see "The top 20 Windows tips of all time", page 103). We've also thrown in illustrated examples of how three typical users (well, actually they're editors) arrange their Windows desktops. Whatever kind of Windows user you are, we think you'll find at least a couple of ideas here that will make using Windows easier.

Artwork by Stephen Turk

EDITED BY DAN MILLER



Keep it clean

1 Using Setup to uninstall

A full Windows installation is insatiable: it gobbles up huge chunks of disk space by installing a bunch of files you'll never need. If your Windows directory is a little bloated, you can slim it down with Windows Setup. Double-click the Setup icon in Program Manager and select *Options-Add/Remove Windows Components*. This will call up the Windows Setup dialogue box, where you can specify the components you want to get rid of.

If you want to delete some README files, for example, click the appropriate Files button and follow the instructions in the resulting dialogue box. As you uncheck boxes, Windows will display a running total of space you've liberated by removing the files. When you're done, click *OK*, then confirm your deletions. If you're ruthless, you can free up more than 5Mb of disk space. You can always reinstall the deleted files from your Windows disks if you need them later.

2 Weight reduction for TrueType

For each TrueType font, there are two files for the base font (ARIAL.FOT and ARIAL.TTF, for example) and six

others for "formatted" versions of the font; that is, bold, italic and bold italic (in this example, ARIALBD.* , ARIALI.* and ARIALBI.*). If you don't require professional-quality fonts, you can delete these additional, formatted font files. You'll still be able to print in bold or italics; Windows will just generate these typefaces from the base font file. However, these generated variations won't look quite as good as the fonts from the deleted font files.

3 Who needs MOUSE.SYS?

Windows automatically loads its own mouse driver when it starts, so unless you run DOS applications requiring a mouse there's no need to load a separate driver in CONFIG.SYS. Leaving it out will save some memory.

4 Not-so-temporary temp files

Windows applications and utilities create lots of temporary files (with the extension TMP), which they should delete when the files are no longer needed. But if you exit Windows improperly — say your system crashes, you have to reboot, or you just turn off your computer without leaving Windows — those temp files may not get flushed from your hard disk.

However, if you're sure you

don't need these files, there's no reason to let them consume precious hard disk space. Most temporary files should be found in the directory specified by the line "SET TEMP=directory" in AUTOEXEC.BAT. However, stray TMP files can turn up in other directories as well. To get rid of them all, quit Windows to get to DOS (don't just shell out of Windows to the DOS command line), switch to the root directory, and type **DIR *.TMP /S**. Once you have the resulting list of the TMP files on your hard disk, you can delete them all.

5 Stripped-down Control Panel

Even on a fast machine, the Control Panel takes its own sweet time launching. That's because it has to load a bunch of applets — Colour, Desktop, Sound and others. If you never use some of these applets, why not save some time and space by telling the Control Panel not to load them?

From Program Manager or File Manager, select **File-Run**. Type **CONTROLINI** and then press **<Enter>** to open CONTROL.INI in Notepad. Move to the bottom of CONTROL.INI and add a section title, **[Don't Load]**. Under the new title, add lines that follow the format **module=TRUE**, where **module** is the name of the module you don't want to load. To get rid of the International module, for example, you add **International=TRUE**. When you're done, save and close CONTROL.INI.

DOS meets Windows

6 Buffers and SmartDrive

If you use SmartDrive, set the **BUFFERS=xx** statement in CONFIG.SYS to **10** or less: buffers may improve disk access times, but they take up precious memory. If you don't use SmartDrive, try **BUFFERS=20**.

7 Where am I?

Ever forget whether you're in straight DOS or just running a DOS session in Windows? Try changing the prompt for your Windows DOS sessions. In AUTOEXEC.BAT, add a

line like **SET WINPMT=Hey, you're in Windows! Sp\$g**. From then on, the prompt will tell you when you've shelled out to DOS from Windows.

8 Promptless DOS

If you can do without the screen that pops up when you shell out to DOS from Windows, the one that reminds you to type **EXIT** to get back to Windows, add **DOSPromptExitIn-**

struc=Off on its own line in the [386Enh] section of the SYSTEM.INI file.

9 Magic marker

Marking and copying text in a DOS application within Windows is a pain. Normally you mark the text, click the horizontal bar in the upper-left corner of the DOS box, then select **Edit** and **Copy**. To save some

The Aesthetic Approach

"Windows should be easy to navigate and pleasing to the eye" — Lincoln Spector



- 1 I'm still searching for the perfect Windows shell. Right now, I'm using PC Tools for Windows. To save screen space, I've turned off its title, menu and icon bars. I can still access the menus by right-clicking the desktop.
- 2 This icon calls up my data directory in PC Tools' File Manager — which is vastly preferable to the Windows version.
- 3 I need two applications — Schedule+ and cc:Mail for Windows — throughout the day. To keep them accessible at all times, I run them minimised up here and open other applications in windows on the left side of the screen.
- 4 It's a drain on performance, but I don't care — I like wallpaper. I switch the wallpaper images from time to time for variety's sake.
- 5 I like to have two or three ways to open my most used programs. So I put applications, utilities and documents I need all the time in PC Tools' Quick Launch, which I can start from any application's control menu or by right-clicking the PC Tools desktop.
- 6 PC Tools' CrashGuard utility monitors available memory and system resources. Because CrashGuard is always visible, I can shut down applications whenever they start to overload my system.

steps, after marking the text with your mouse, click the right mouse button once. The text is placed in the Clipboard, ready to be pasted into another application.

10 Closing windows on DOS applications

If you run DOS applications in the background, make sure you've unchecked the *Allow Close When Active* option in the advanced section of the application's PIF. If you don't turn this option off, you may shut down Windows while the application is still running, which means it won't have a chance to save its work.

Take it easy

11 For lefties only

Menus in Windows normally drop down to the right of the menu name. If you're left-handed, you may find this alignment awkward. To force the menus to drop down to the left of the menu name, add the line **MenuDropAlignment=1** to the [Windows] section of WIN.INI.

12 Hot-key madness

You can assign hot keys to applications by selecting the appropriate icon in Program Manager, pressing **<Alt>+<Enter>**, and then assigning a key combination in the Shortcut Keys box. Once the hot key is assigned, you can use it to switch to or open that application. But there's a problem: the hot-key combination opens an application only when you're in Program Manager.

The solution? Give Program Manager its own hot key. You start by dragging PROGMAN.EXE from File Manager into your Program Manager StartUp group. Select the Progman icon, press **<Alt>+<Enter>**, specify a key combination in the Shortcut Key box, and click **OK**. From now on, to open an application

quickly, press Program Manager's shortcut key combination, then hot-key from Program Manager to your desired application.

13 Easy unzipping in Windows

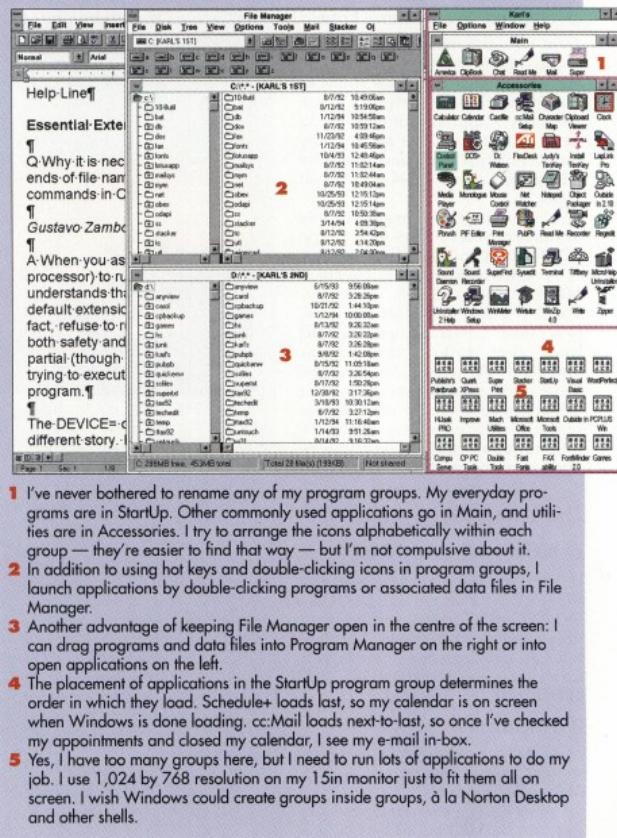
If you need to decompress ZIP files when you're in Windows, you could use a specialised utility like Drag

And Zip or WinZip. But if you want to keep things really simple, you could instead just use the copy of PKUNzip you probably already have. The trick is to create an association between ZIP files and PKUNzip in File Manager.

In File Manager, select a ZIP file. Next, select **File->Associate**, and in the

The Pragmatic Approach

"So many applications, so little desktop" — Karl Koesse



1 I've never bothered to rename any of my program groups. My everyday programs are in StartUp. Other commonly used applications go in Main, and utilities are in Accessories. I try to arrange the icons alphabetically within each group — they're easier to find that way — but I'm not compulsive about it.

2 In addition to using hot keys and double-clicking icons in program groups, I launch applications by double-clicking programs or associated data files in File Manager.

3 Another advantage of keeping File Manager open in the centre of the screen: I can drag programs and data files into Program Manager on the right or into open applications on the left.

4 The placement of applications in the StartUp program group determines the order in which they load. Schedule+ loads last, so my calendar is on screen when Windows is done loading. cc:Mail loads next-to-last, so once I've checked my appointments and closed my calendar, I see my e-mail in-box.

5 Yes, I have too many groups here, but I need to run lots of applications to do my job. I use 1,024 by 768 resolution on my 15in monitor just to fit them all on screen. I wish Windows could create groups inside groups, à la Norton Desktop and other shells.

Command Line box enter **drive:\path\PKUNZIP.EXE**, where **drive:\path** specifies the directory containing PKUnzip. Click OK. From now on, when you double-click a ZIP file in File Manager, PKUnzip will decompress it.

14 Help bookmarks

Do you use a couple of Help topics over and over? If so, you can access them more easily using bookmarks. To set these up, select **Bookmark-Define** when you're on the topic you want to mark. Name the bookmark at the prompt and click **OK**. Next time you need help on one of these marked topics, just select **Help-Contents-Bookmark** and then pick the name of the Help topic that you want from the list.

15 Annotate Help

With the Windows manuals, you can scribble notes in the margins. However, there is an easy way to add your notes to the Windows Help screens, too.

With the topic you want to annotate on-screen, select **Edit-Annotate**. A notepad pops up; make your notes and click **Save**. A paper clip appears at the top of the Help text. Next time you need your notes, all you need to do is click the paper clip.

Speedup secrets

16 Nothing to lose but your pixels

You can improve performance by choosing the lowest screen resolution that meets your computing needs. For example, if you're currently working at 800 by 600, try using 640 by 480 instead. You'll have to rearrange your desktop a bit, but if you can make it work, Windows will run faster.

17 What size SmartDrive?

Although you can specify any cache size you want with SmartDrive, most of the time you should stick with a maximum of 2Mb. Few systems benefit from large cache sizes; beyond 2Mb, cache performance doesn't increase significantly.

18 Pain and buffering

If you use 32-bit disk access, you can optimise transfers to and from your swap files by adding the statement **PageBuffers=x** (where **x** is a multiple of four from four to 32) to the [386Enh] section of SYSTEM.INI. While 32 is a good setting for most systems, experiment with others to find out which is the best one for you.

19 Swap files + RAM disk = dumb

Some users think putting swap files on a RAM disk will improve performance — after all, if putting a swap file on your hard disk improves performance, putting it on a fast RAM disk should be faster, right? Wrong. A swap file uses part of the hard disk to mimic memory; a RAM disk uses RAM to mimic a hard disk. Assigning a swap file to a RAM disk means you're using memory to mimic a hard disk that's mimicking memory — in other words, you're going around in circles and getting nowhere.

20 Temp files + RAM disk = smart

While putting swap files on a RAM disk is dumb, putting temporary files on a RAM disk is smart (as long as you have at least 8Mb of RAM). To create a 2Mb RAM drive (the minimum for Windows use), add the line **DEVICE= C:\DOS\RAMDRIVE.SYS 2048 /E** to CONFIG.SYS. The 2048 sets the size of the drive, and the /E switch puts it in extended memory. Next add the lines **md d:\temp** and **set temp=d:\temp** to AUTOEXEC.BAT. These lines assume the RAM disk has been created as drive D:. DOS automatically assigns the next available drive letter to your RAM drive. If you already have a drive D: (or E: or F:), set your temp directory accordingly.

Troubleshooting tricks

21 Clean your boots

A clean boot is an essential first step in troubleshooting any serious system problem. But what is a clean▷

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boot? On a Windows system, a clean boot means your CONFIG.SYS reads:

```
FILES=45
BUFFERS=20
DEVICE=C:\path\HIMEM.SYS
DEVICE=Disk partitioner, disk compression driver or other third-party drivers
STACKS=9,256
SHELL=C:\COMMAND.COM /E:1024/P
```

If you have lines in your CONFIG.SYS beyond this bare minimum, remark them out (deactivate them) by typing **REM** followed by a space at the beginning of the line.

A clean-booting AUTOEXEC.BAT file should consist of nothing more than:

```
PROMPT $PSG
PATH=C:\WINDOWS;C:\DOS;C:\%
SET TEMP=C:\TEMP
```

Clean start-up files should not contain memory managers, including EMM386.EXE; the command DOS=HIGH,UMB; software disk caches, including SmartDrive; the JOIN, GRAPHICS, PRINT, SUBST or APPEND commands; RAM disk devices; drivers for net-

works, CD-ROM drives, scanners or faxes; DOS mouse drivers; or virus checkers.

22 Logging your boot

If you're having trouble getting Windows to run, it may help to start Windows by typing **WIN /B**. The **/B** switch creates a file, BOOTLOG.TXT, in your \WINDOWS directory, which will show you what's loading properly and what isn't when you start Windows. After you boot, open BOOTLOG.TXT in a text editor and look for the phrase "LoadFail=". It will be followed by the names of Windows components that didn't load properly.

23 Sneaky swap file settings

Windows sometimes changes the size and type of your swap file when you change the 32-bit disk access setting in the Control Panel. To prevent this, change the 32-bit disk access setting in SYSTEM.INI instead of in the Control Panel. Just open SYSTEM.INI in a text editor (or by using SYSEDIT.EXE) and change the line reading "32BitDiskAccess=" in the [386ENH] section. When you're finished, restart Windows to put your changes into effect.

24 Deleting forgotten passwords

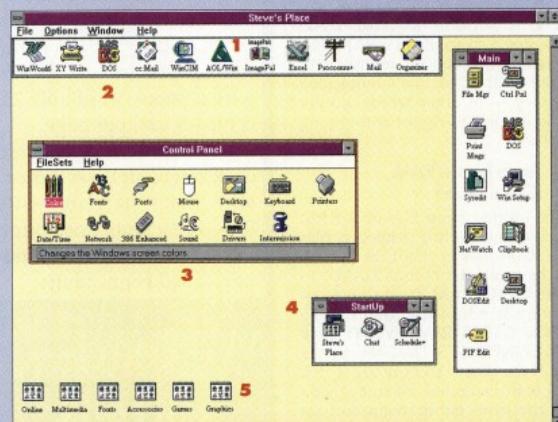
What should you do if you forget the password for your Windows 3.1 screen saver, leaving you locked out of Windows? Kicking and screaming is always an option, but the only productive alternative is to turn off and then turn back on your computer, restart Windows, open CONTROL.INI in a text editor, find the [ScreenSaver] section, and delete the line starting "Password=".

25 Save your setup

Before you install a new application or make any major change to your Windows setup, copy the INI, DAT and GRP files from the Windows directory to a floppy or another directory on your hard drive. If the new application messes up your system, you can restore the old setup by copying these saved files back into your Windows directory.

The Neat Approach

"My office is a mess, but my Windows desktop is clean and lean" — Steve Fox



- 1 My everyday applications are in a single program group that masquerades as a tool bar. First I sized the window so the icons fit into a single row, then I pushed the group up to the top of the screen until its title bar disappeared.
- 2 I've also reduced the spacing between icons and shortened their labels.
- 3 I've streamlined Control Panel by getting rid of modules I never use, such as MIDI Mapper and International (see Tip 5). And note that I've changed the menu title from the default Settings, to FileSets, by editing CONTROL.EXE. That way, I can use the same keyboard combination — <Alt>+FX — to close Control Panel that I use to close my other applications.
- 4 I keep Program Manager in my StartUp group. That allows me to rename it Steve's Place. It also means I can assign a hot-key to it (see Tip 12).
- 5 In addition to my everyday tool bar group (top of the screen), Main, and StartUp, I have six other groups — a total of nine, the maximum number of groups Program Manager will display under the Windows menu.

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QMS® 3225 Print System	32 pages per minute	400x400 dpi	Ethernet TCP/IP®, DECNet®, Novell® NetWare, Token Ring®, EtherTalk, Serial, Parallel, AppleTalk	Triple	A4/A3 Paper, Labels, Transparency
QMS® ColorScript® Model 230	1 page per minute	300x300dpi Full Colour	Ethernet TCP/IP®, DECNet®, Novell® NetWare, Token Ring®, EtherTalk, Serial, Parallel, AppleTalk	Single	A4/A3 Paper, Labels, Transparency
QMS® ColorScript® CS 1000®	3 Ppm Colour 8 ppm Mono	Full Colour & Monochrome	Ethernet TCP/IP®, DECNet®, Novell® NetWare, Token Ring®, EtherTalk, Serial, Parallel, AppleTalk	Dual	A4 Paper, Labels, Transparency

The top 20 Windows tips of all time

26 Want to maximise a window? Double-click the title bar — it's easier to hit than the Maximise button.

27 If you're already typing, there's no need to move your hand to the mouse to navigate menus. Just press **<Alt>**, then the letter underlined in the menu's title on the menu bar.

28 If your fingers are already on the keyboard, press **<Enter>** to select OK in a dialogue box instead of using the mouse.

29 You don't have to click *Cancel* when you've mistakenly opened a dialogue box. Press **<Esc>** instead.

30 Those long and short horizontal bars in the upper left corners of the application and document windows access control menus. From the keyboard, press **<Alt>+<Space>** to open the application's control menu and **<Alt>+<Hyphen>** to open the document's control menu.



31 Switch from one application to another by holding down the **<Alt>** key and pressing **<Tab>**. If you have several applications open at the same time, you can press **<Tab>** repeatedly to cycle through them.

32 You can usually cycle through the windows in an application by holding down **<Ctrl>**, then tapping the **<Tab>** key.

33 Move program icons from one Program Manager group to another by dragging and dropping. To copy an icon, hold down **<Ctrl>** while you drag it.

34 To copy a file in File Manager, put the mouse pointer on the file's name in the file pane, hold down the left mouse button and **<Ctrl>**, and drag the file to the appropriate directory in the tree pane. To move a file, do the same thing, but hold down **<Alt>** or **<Shift>** instead of **<Ctrl>**.

35 To associate a document with its application, highlight a document in File Manager, then select *File—Associate*. With the document's extension in the

Files with Extension box, pick the name of its application from the list. If you don't find it there, use *Browse* to find it. When the correct application is in the Associate With box, just click **OK**.

36 Press **<Ctrl>+<Esc>** or double-click on the exposed surface of the desktop to call up Task Manager's list of open applications.

37 To launch a program every time you start Windows, copy its icon into the StartUp group. To bypass the StartUp group, hold down **<Shift>** while Windows is launching; programs in WIN.INI's run= and load= lines will still run or load.

38 In most applications, you copy, cut, paste and undo using **<Ctrl>+C**, **<Ctrl>+X**, **<Ctrl>+V**, and **<Ctrl>+Z**, respectively.

39 Create hot keys to launch applications from Program Manager. Highlight the application's icon, press **<Alt>+<Enter>**, tab down to the Shortcut Key box, then press the key combination you want to use.

40 When selecting files in a Windows drop-down list, hold down **<Shift>** to select an adjacent group of files, **<Ctrl>** to select a non-adjacent group.

41 Use SYSEDIT.EXE, located in WINDOWS\SYSTEM, to open your CONFIG.SYS, AUTOEXEC.BAT, WIN.INI, and SYSTEM.INI files for editing.

42 Don't shell out to the DOS prompt to run DOS applications; use Program Manager instead. Add the DOS application to a program group just as you would any Windows application.

43 Add items to a program group by dragging the files you want from File Manager to the appropriate Program Manager group.

44 To toggle between full-screen and windowed views when you are running a DOS application from Windows, press **<Alt>+<Enter>**.

45 To shell out to DOS from File Manager, select *File—Run*, type **COMMAND**, then press **<Enter>**.

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A Window on the Internet

The Australian company Oz-Email is providing a window on the Internet, or to be precise a Windows interface to the Internet. For those of us who have been struggling with the arcane demands of the usual Unix interface, this is a real sanity saver. Oz-Email is just one of a new batch of service providers that are making the Internet more accessible to business and the general public — but the first to give the Internet a Windows facelift.

Laying it on-line

Oz-Email does for on-line services what Windows did for PC users — it gives them a graphical environment that is easier and more intuitive to use. Some of the Windows-based facilities provided by Oz-Email include:

- An electronic mail system that allows you to send e-mail to users of Oz-Email, the Internet, CompuServe and MCI Mail, as well as directly to pagers and fax machines

It's much easier to peer into cyberspace through a window, rather than a command-line

- Access to AAP-Reuters and NewsBytes news services
- Public and private chat lines for on-line "chatting"
- Message forums (sometimes called conferences or newsgroups), including some that are native to Oz-Email and others from the wider Internet
- Windows versions of common Internet tools, such as FTP for retrieving files, and both Gopher and Telnet for accessing other computer systems such as libraries and databases.

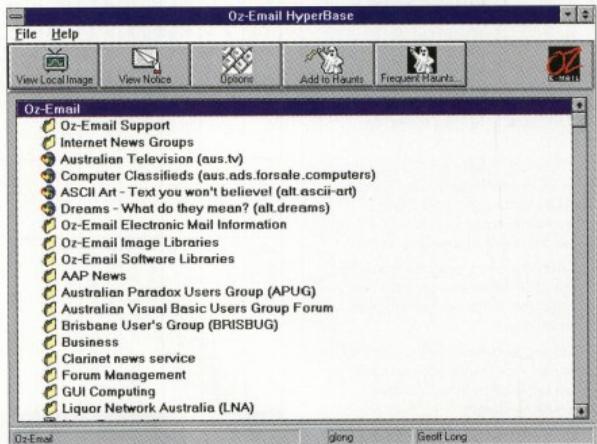
There are three Oz-Email packages to choose from, depending on your needs. The Oz-Email Windows Pack (\$79) provides access to electronic mail, all the message forums and tools for public or private on-line "chatting". The Internet Access Pack

(\$79) consists of OzTelnet, OzFTP and OzGopher. A third package, Oz-Email Gateways, can be used to integrate existing LAN-based e-mail systems into the Oz-Email system, and is compatible with cc:Mail, Microsoft Mail and MHS-compatible e-mail systems. It costs \$500 for a 10-user licence, with 20-user and unlimited-user licences also available.

Registered e-mail

When you get Oz-Email, you are designated an e-mail account (your mailbox) and a username and password. You then run the installation program, which will create the various programs and place them in the Windows Program Manager. Once set up, you just double-click as you would a regular Windows program and in a few seconds you'll be on-line, ready to explore. In the Oz-Email Windows pack, for example, a program called HyperBase is used to connect to Oz-Email's message forums. You simply double-click on HyperBase and it will instruct your modem to connect to the main Oz-Email server — no communications software is necessary as a separate program called OzRouter handles all the communications details.

In a few moments, the various forums appear, arranged hierarchically in folders. There are Oz-Email's own forums, where Oz-Email users discuss various topics; Internet forums (known as newsgroups on the Net); HyperBase Information Pages, which is text with hypertext linkages similar to Windows help files; libraries of files (such as shareware programs) that you can download from or upload to; and image libraries which contain various graphics that can be viewed, printed or saved to a file.



Oz-Email's HyperBase program uses the folder paradigm familiar to Windows users. Note the ghostly 'Frequent Haunts' button which tags folders for frequent use

NewsBytes Alert

Reference name: NewsBytes: Internet

Search for:

- Only stories containing
- In headline
- Anywhere

All stories

Minimum stories per day:

- No limit
- Limited to

Deliver to:

- Me, directly via E-mail
- Fax to person on
- E-mail to address:

OK Cancel Delete

Become your own media magnate with the Oz-Email Newsclip utility. It will find news stories for you, and e-mail or fax them to yourself or a fellow mogul

With so much information available — there are thousands of folders in the Internet newsgroups alone — the "Frequent Haunts" feature is useful for instantly accessing the folders that you commonly look at. To add a folder, you simply highlight it and click on the "Add to Haunts" button at the top of the screen: the folder will then be listed as one of your regular "haunts".

There are a number of other nice touches that make Oz-Email convenient to use. For instance, if you post a message to one of the forums, you can have Oz-Email automatically send you an e-mail message when someone responds to your posting, saving you the trouble of constantly checking. Downloading files is also a simple affair. You simply click on the download button and a small icon in the form of a fuel gauge appears, showing the progress of the download. The download occurs in the background and a message box appears to tell you when the download is complete. You can download up to four files at a time.

Another Oz-Email utility, Newsclip, allows you to compose search requests for information from the news stories on AAP/Reuters and NewsBytes. Rather than access these services through HyperBase,

you send your search request to the Oz-Email server which will continually scan all news stories until it matches your request. Any that are found are e-mailed to your mailbox, or to a fax machine if desired.

Dialling in

There is currently local-call access in Sydney, Melbourne, Canberra, Brisbane, Adelaide and Perth, and Oz-Email expects to add regional centres to this list in the next 12 months. If you dial from outside one of these centres, the cost of the call will be added to your telephone bill.

Once connected, the standard rates (Monday to Friday, 7am to 9pm) are \$2 per hour for e-mail and \$10 per hour for other services, with charges billed in five minute intervals. Off-peak rates are \$2 per hour for e-mail and \$5 per hour for other services. Also, there are extra charges for sending e-mail based on the number of characters sent. For more information, contact Oz-Email on 008 805 874.

— Geoff Long and Keng Chua

Accountants on the Net

The "ANet" is the co-operative venture of a number of individuals and institutions around the world, which seeks to provide an electronic forum on the Internet for issues in accounting and auditing. It includes a variety of e-mail discussion groups and an on-line database of information, centred at Southern Cross University on the north coast of NSW.

Among the objectives of ANet are to provide information to members of the worldwide accounting community, and a range of services — at no cost to users — available in the public domain. The services include a coming-events calendar which can be updated by approved users from around the world; a list of academic journals with their contact, subscription and submission details; details of forthcoming conferences; and details of academic and professional accounting associations and societies.

ANet shares information with the American Accounting Association and it is expected that similar arrangements will be made with other organisations. For more information, e-mail ANetAdm@scu.edu.au or phone Roger Debreceny, the ANet co-ordinator, on (066) 20 3837.

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PRODUCT COMPARISON

SCANNERS

We find out about PC reliability and service by putting them to the test. We visit five of the top PC makers and talk to corporate computer buyers. We talked to corporate computer buyers about the reliability of their machines. We express both quality control and user satisfaction. And we explore the latest developments in PC technology, from the latest in the industry.



PHILIP KAARE

The Test Centre scrutinises affordable colour and greyscale scanners and finds that digitising can be both fun and frustrating

BY DAVID SOKOL

SCAN

The cost of purchasing a scanner has now dropped to an affordable level for most corporate and SOHO users. As producing in-house newsletters and flyers becomes more popular, creating graphics images, and word processing documents from text originals, becomes more important.

From the Test Centre this month, we look at the options available for those who want to "test the water" in this sector of the market. We have targeted scanners that would normally be used by office or SOHO users, so we have intentionally excluded high-end products destined for the pre-press scanner arena.

We chose one OCR (Optical Character Recognition) package and one graphics package to be our software standards for the review. It is important to stress that we used the default settings of the software packages and each scanner's TWAIN drivers to produce the output results that we judged. It may be possible to keep fiddling with the many software settings available in some drivers, and keep re-scanning to improve the final product. But that would have taken more time than we had available to us, and, in our opinion, the various software settings should be used to fine-tune a scan that was pretty good to start with, rather than to compensate for an unsatisfactory scanner.

The panel of judges that rated the quality of the output was convened from different parts of the PC World team: from editorial (to take

the lay person's view of what looks good) and from production (to cast a more professional eye over the output). There were seven reviewers in all, and just to show how subjective this sort of review can be, it was very rare that any rating was unanimous. Please refer to the "How we tested scanners" section at the end of the review for more information about the testing process.

Tips for success

We reached some very obvious observations during this review. Tip number one: *make friends with a kind dealer*. We had difficulties in setting up nearly every scanner — even those with clear instructions expected us to manually match free high-memory addresses to jumper settings on the SCSI card. Some documentation omitted any reference to having to edit CONFIG.SYS and SYSTEM.INI to exclude ranges of memory. This stuff is not for the faint-hearted.

An unexpected surprise was that some of the scanners, especially the Teco/Relisys products, did not work with one or more of our test machines because of unresolvable memory conflicts. In the case of the Teco/Relisys scanners, we even set up a third PC in an attempt to get it working — but to no avail. So tip number two is *make sure the scanner of your choice works with your machine before you part with your money*. Teco has since informed us that it has received a new installation procedure and a more complete TWAIN driver, which it is currently testing — both may be available by the time you read this.

Also, remember that hardware problems may not be the scanner's fault — your PC may do funny things in high memory that you can't easily change, especially with some of the latest video cards.

Tip number three is very philosophical: *we do not live in a perfect world* — or maybe that should be, *in a perfectly reproducible world*. The simple fact is, with the budget we have assumed you have (even including a colour dye-sublimation printer for a five-figure sum), you are not going to get a perfect copy of your original. Acceptable, yes. Perfect, no. So ensure that your expectations are realistic.

Greyscale and colour

In simple terms, we used two types of graphics originals, colour and greyscale. There were also two primary types of scanners, colour and greyscale.

Colour scanners can scan colour and greyscale originals: they produce colour scans from colour originals, and greyscale scans from either colour or greyscale originals. Greyscale scanners can scan colour and greyscale originals, but can only produce greyscale output.

Hand-helds

We received three hand-held scanners: the Caere OmniScan for Windows, the Logitech ScanMan EasyTouch and the Logitech Scan-Man Colour.

While the maximum resolution

Continued page 111 ▶

E & DELIVER

PRODUCT COMPARISON

SCANNERS

EXECUTIVE SUMMARY

Epson in the picture

None of the scanners produced an exact duplication of the quality of the originals. Some were better at OCR than graphics, and some which were good at graphics performed better with greyscale or colour originals. But heck, we don't live in a perfect world.

The Best Buy is clearly won by the **Epson GT-8000**. Its output was of a consistently high quality with colour originals, and of acceptable standard with a greyscale source. Its performance was exceptional when scanning at 300dpi, and it's easy to set up and use. All this and a great price to boot.

There is a group of scanners not that far behind. The **AV680C**, **AVR8800**, and the two scanners reviewed from the UMAX range — the **UC630** and the **UC1260** — all delivered generally good results. The first two are marked down because of their documentation, rather than any quality or performance problems. Likewise, the UMAX scanners are only marked down because they were relatively slow.

The **Caere OmniScan** certainly heads the hand-held class and takes a SOHO Best Buy. If you're happy to use the bundled software rather than TWAIN-compliant software and

you're on a budget, then this could be the answer to your low-volume scanning needs. It produced very good results from colour originals, and satisfactory results in the greyscale tests.

The **Canon IX-4015** and the **Microtek ScanMaker IISp** produced better results from greyscale originals than colour, but the ScanMaker IISp produced more accurate results in the OCR test. The Canon is a little cheaper but has a slightly lower maximum resolution.

The **Epson GT-6500** suffers from the inclusion of a bi-directional parallel port card, rather than the Adaptec SCSI that came with the GT-8000. The scanner will support a SCSI card which would clearly improve the scanning speed, but probably increase the price, too. Having lower resolution and being only \$500 cheaper than the GT-8000, the GT-6500 is not as good a buy as its sibling.

The **Fujitsu ScanPartner 10** and the **Apple OneScanner** for Windows were big disappointments. While both are greyscale scanners, they are priced higher than most of the colour scanners; the quality of their scans was good, but it's difficult to justify their price tags. Additionally, Apple's scanner does not have TWAIN drivers which makes it a cumbersome task to manipulate or print the scanned images.

REPORT CARD

Scanners

	Apple OneScanner	AVision AV680C	AVR8800	SOHO BEST BUY	Canon IX-4015	Epson GT-6500	Epson GT-8000	Fujitsu ScanPartner 10
Type	flat-bed greyscale	flat-bed colour	flat-bed colour	hand-held greyscale	flat-bed colour	flat-bed colour	flat-bed colour	flat-bed with sheet-feeder greyscale
Price (including tax)	\$2,295	\$2,195	\$2,190	\$670	\$2,425	\$1,546	\$2,007	\$3,599
Performance	Good	Very Good	Good	Very Good (2)	Very Good	Poor	Excellent	Very Good
Quality from colour original	Excellent	Good	Very Good	Excellent	Satisfactory	Good	Excellent	Good
Quality from greyscale original	Satisfactory	Very Good	Good	Satisfactory	Very Good	Satisfactory	Satisfactory	Good
Documentation	Good	Satisfactory	Satisfactory	Very Good	Good	Good	Good	Poor
Setup and ease of use	Good	Good	Good	Good	Good	Good	Good	Good
Flexibility of drivers	Poor	Excellent	Very Good	Satisfactory	Very Good	Good	Good	Good
Value	Poor	Very Good	Very Good	Satisfactory	Satisfactory	Good	Excellent	Poor
Final score	5.8	7.9	7.5	6.9	6.9	6.0	8.3	5.9

(1) Failed to perform tests (2) Assessment based on how quickly our tests were completed to a satisfactory quality

SCANNERS

PC WORLD

The Logitech ScanMan Colour hand-held scanner is the best of the Logitech range that we tested. Granted, it's the cheapest way to get colour scans, but the quality of the results was poor and scanning greyscale originals did not improve things.

The Sharp JX-325 is the lowest ranked flat-bed scanner. It was a slow performer with a high price tag, and had no TWAIN drivers (the driver was in beta testing and may be released by the time you read this). The colour output was good, but the greyscale was only satisfactory.

Lastly, there is the Logitech ScanMan EasyTouch (which doesn't live up to its name) and the Logitech ScanMan PowerPage for Windows. Both delivered poor quality output using the default software settings. With the EasyTouch, each image had to be scanned over and over again to get any real result, and the software "auto-stitching" of the image strips to build the final image can take ages, even on the 486DX2-66 we were using.

Unfortunately, we can make little comment about the Teco/Relisys scanners because we couldn't get them to work due to memory conflicts — but Teco will soon have a new driver and installation procedure.



The Epson GT-8000 turned in a big all-round performance to take our Best Buy award

PC WORLD

Logitech ScanMan PowerPage for Windows	Logitech ScanMan EasyTouch	Logitech ScanMan Colour	Microtek ScanMaker IIsp	Sharp JX-325	Teco/Relisys 3530+	Teco/Relisys 6530+	UMAX UC630	UMAX UC1260
sheet-feeder greyscale	hand-held greyscale	hand-held colour	flat-bed colour	flat-bed colour	flat-bed colour	flat-bed colour	flat-bed colour	flat-bed colour
\$999	\$440	\$803	\$2,541	\$3,252	\$1,999	\$4,005	\$1,735	\$3,840
Poor	Poor (2)	Satisfactory (2)	Very Good	Satisfactory	N/A (?)	N/A (?)	Satisfactory	Satisfactory
Poor	Poor	Poor	Satisfactory	Good	N/A (?)	N/A (?)	Satisfactory	Good
Poor	Poor	Poor	Good	Satisfactory	N/A (?)	N/A (?)	Very Good	Good
Very Good	Very Good	Very Good	Satisfactory	Poor	Poor	Poor	Excellent	Excellent
Satisfactory	Good	Good	Satisfactory	Satisfactory	Poor	Poor	Excellent	Excellent
Satisfactory	Good	Good	Excellent	Poor	Satisfactory	Satisfactory	Excellent	Excellent
Good	Good	Good	Good	Poor	Good	Satisfactory	Good	Satisfactory
4.6	5.0	5.4	6.8	4.3	N/A	N/A	7.5	7.2

PRODUCT COMPARISON

SCANNERS



The colour photo used as part of our tests: a lovely shot of our nation's capital



The Epson GT-8000 was judged to have done the best job of scanning the original. The colouring is good and there is only a minor loss of resolution



Our panel decided the poorest result came from the Logitech ScanMan Colour. Resolution has suffered considerably and the colours speak for themselves

SCANNERS

From page 107

each was similar to that of the flat-bed scanners, the results were nowhere near as good. The error rates in the OCR scan tests were up to 90 per cent higher than with the flat-beds, and the quality of the graphics was inferior.

On the positive side, the hand-holds are certainly cheaper and they come with a well-balanced combination of bundled software. For environments where scanning devices need to be shared around, hand-holds provide the most portable solution — although the Logitech ScanMan EasyTouch is the only one of the three that connects directly to a PC without the need to open the PC to insert an I/O card.

Originals larger than the width of the scanner (about five centimetres) need to be scanned in multiple strips. The software then "stitches" the strips together to produce a single scanned image. This process can take over 30 minutes.

Because the speed of a hand scan is not controlled mechanically, there are lights, beeps and software to give feedback on the speed at which you are moving the scanner. Scanning too fast produces garbage results, and we found ourselves forever going back and re-scanning strips to get some sort of acceptable result.

Single-sheet scanner

We only received one such scanner, the Logitech ScanMan PowerPage for Windows. The concept sounded great: a scanner that looks like a

bubble jet printer, plugs directly into the parallel port of your PC, scans single sheets of paper (yet by unclipping the top, can scan a page from a book) and is bundled with a good set of OCR and graphics scanning software, and fax software for sending your work out via a fax modem. All this for less than \$1,000.

We were excited by what we thought was a complete system for greyscale scanning, but the results were not exciting at all, and the final tally showed this scanner to be at the

tail of the field. As well as poor results, Logitech has decided against supplying a pass-through parallel adaptor, so when you want to print and scan you need to keep plugging and unplugging your scanner and printer cables into and out of the parallel port. The documentation suggests that you buy a card with a second parallel port, but Logitech has shown with its ScanMan EasyTouch that it does have the know-how to design pass-through adaptors so that the printer cable simply plugs into

PC WORLD

REPORT CARD

Flat-bed greyscale scanner **Apple OneScanner**

CRITERION	SCORE
Performance	Good
Average time for graphics, but a good time with good accuracy for OCR.	
Quality from colour original	Excellent
Quality from greyscale original	Satisfactory
Documentation	Good
Setup and ease of use	Good
Flexibility of drivers	Poor
No TWAIN drivers; need to scan into OFOTO software, then paste into the application to print.	
Value	Poor
Greyscale scanning for more than the price of some of the colour scanners.	
Final score	5.8

PRODUCT SUMMARY

Company: Apple Computer Australia Pty Ltd, 16 Rodborough Road, Frenchs Forest, NSW 2086.
Phone: (02) 452 8000.
Fax: (02) 452 8239.
Price: \$2,295.
Pros: Good OCR speed and accuracy; excellent quality from colour originals.
Cons: No TWAIN drivers; over-priced.

PC WORLD

REPORT CARD

Flat-bed colour scanner **AVision AV680C**

CRITERION	SCORE
Performance	Very Good
Faster than average times for OCR and graphics scans.	
Quality from colour original	Good
Quality from greyscale original	Very Good
Documentation	Satisfactory
The manuals were very brief.	
Setup and ease of use	Good
Flexibility of drivers	Excellent
Value	Very Good
Final score	7.9

PRODUCT SUMMARY

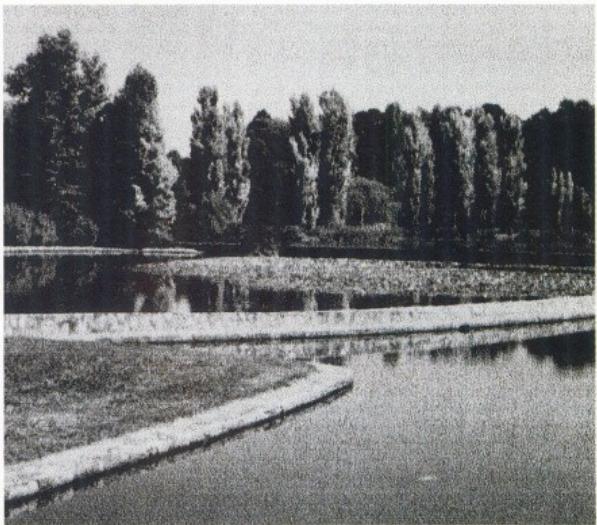
Company: Practical Peripherals Corporation Pty Ltd, 457 Adelaide Street, Brisbane, Qld 4000.
Phone: (07) 839 1142.
Fax: (07) 839 1145.
Price: \$2,195.
Pros: A good performer in all areas.
Cons: None significant.



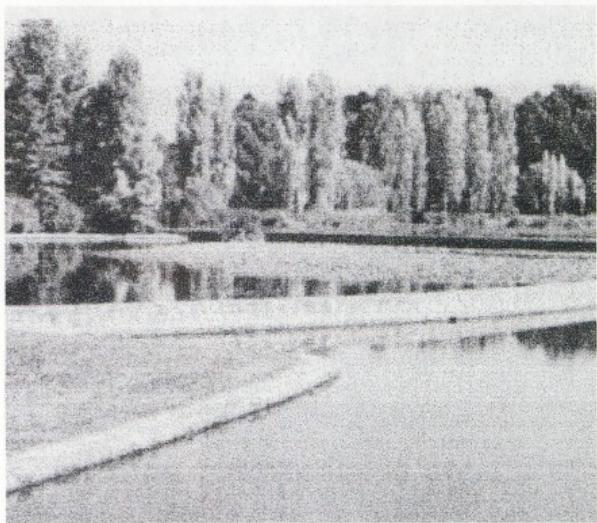
The sleek Logitech ScanMan EasyTouch uses an adaptor to share the computer's parallel port with your printer

PRODUCT COMPARISON

SCANNERS



For greyscale output from a colour original, the Caere OmniScan was voted the winner



The output from Logitech's ScanMan PowerPage for Windows was voted into last place

the end of the scanner adaptor which plugs into the parallel port.

Another disadvantage of this scanner is that there is no facility to scan only a portion of your original (eg, a 2cm by 2cm square inside a 5cm by 5cm photo). In most cases you wouldn't consider this a major criticism, but this scanner took over five minutes to scan an A4 page, so it does become a factor.

Flat-beds

This is the market in which most manufacturers are interested. Most of the scanners tested have optional automatic document readers (ADRs) and units for handling overhead transparencies, so you can set up a system for high-volume, high-speed and high-resolution scanning.

Above and beyond all of these benefits, documents can be re-scanned many times without constantly handling the originals, which makes the task of fine-tuning a scan much more pleasant. It's not surprising to see that the results are far more impressive compared to hand-held scanners, and the extra cost of the flat-beds is well worth it.

Performance: OCR

In the OCR tests, we were looking for both speed and accuracy. We knew that by choosing OmniPage Professional version 5 as our standard OCR package, we were using one of the best on the market. We also knew that the pages we used as test documents (see "How we tested scanners", page 120) would stress any scanner and any OCR package.

For the magazine test page, the scan speeds ranged from seven seconds for the Epson GT-8000 (using an Adaptec SCSI card), to over two-and-a-half minutes for the Epson GT-6500 (using their bi-directional parallel port adaptor card). But the error rate for our magazine test page seemed steady at around 42 mistakes. Granted, we needed to re-test many scanners using a photocopy of the original page (to overcome the yellowish background colour of the original) to get down to around that number, but that seemed a small price to pay for a consistent result. ▶

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Fax (02) 427 7255. Unit 1, 6-8 George Place, Artarmon, NSW 2064.

The anomalies were with the Caere OmniScan hand-held scanner, which returned nearly double the average number of errors, and the Logitech ScanMan Colour hand-held scanner which returned an error rate almost 50 per cent more than the average.

The page from our laser printer using the Century Schoolbook TrueType font produced more consistent results from the flat-bed scanners, with the Apple OneScanner, AVR8800, Canon IX-4015, Fujitsu ScanPartner 10 and the Microtek ScanMaker IIsp recording no errors.

On the other hand, the hand-helds still returned an unacceptable number of mistakes.

Performance: graphics

For the graphics tests, we used Adobe's PhotoShop for those scanners which were supplied with either TWAIN drivers or PhotoShop plug-in modules. We excluded all the hand-helds from the performance tests because their scanning speed is controlled by the operator, and is therefore not reproducible.

The performance results for generating 300dpi greyscale images varied considerably. The fastest scanners were the Microtek ScanMaker IIsp, the AVR8800 and the Fujitsu ScanPartner 10 which all scanned the test page in around 30 seconds. At the other end of the scale was the Logitech ScanMan PowerPage for

TWAIN's world

As computer hardware, software and peripherals became more complex, vendors in the graphics/imaging industry were faced with the challenge of finding a seamless way of bringing images into software applications. Software developers needed compatibility with a wide range of output devices, without developing and maintaining multiple device drivers. Hardware developers needed compatibility with a wide range of applications, without application-dependent coding.

The most obvious solution was an open industry-standard interface that directly acquires image data from external sources while within an application. In this way, each software developer supports a standard acquisition manager and each hardware vendor writes one driver for their device. Users benefit because they can have fewer drivers at the operating system level, and can take advantage of smooth image acquisition from a large number of applications.

The TWAIN Working Group was formed from representatives of Aldus, Caere, Eastman Kodak, Hewlett-Packard and Logitech. Believe it or not, TWAIN stands for Toolkit Without An Interesting Name. The Working Group's primary goal was to promote the use of imaging products by developing an integrated, easy-to-use acquisition interface. TWAIN was designed to allow for the consistent, easy migration of image data between sophisticated input devices and software applications.

Specifically, TWAIN was to include:

- multiple-platform support: the interface must go beyond Mac and Windows to Unix and OS/2
- support for multiple devices: hand-held, flat-bed and slide scanners, together with image capture boards (frame grabbers), digital cameras, etc
- easy implementation
- longevity
- multi-format capacity: general data mechanism to include TIFF, PICT and DIB, but to extend to non-image formats (such as text and facsimile data vector graphics).

Adapted from The Development of the TWAIN Standard in the Canon IX-4015 TWAIN Driver User's Manual.

Windows which took more than five-and-a-half minutes to complete the same scan. Among the slowest flatbeds, the Epson GT-6500, the UMAX UC630 and the UMAX UC1260 all took over two-and-a-half minutes to finish the scan.

Scanning at 600dpi should take four times longer than scanning at 300dpi, since the resolution is doubled horizontally and vertically. The reality is that very few scanners observed this formula. Not surprisingly 300dpi scanners that interpolated to reach 600dpi (ie, the scanner did not support 600dpi at scan time, but rather mathematically calculated the image at the higher resolution) would take longer than four times, whereas those which directly supported the higher resolution should be nearer to the mark.

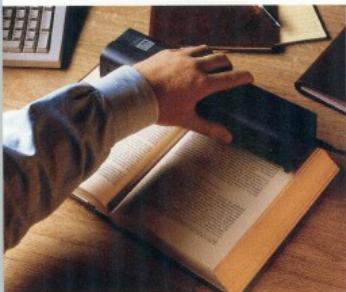
The AVision AV680C and the Epson GT-8000 were the only scanners to return scan times consistent

with the formula. The UMAX UC630 and the UMAX UC1260 actually scanned at the higher resolution in about half of the expected time. The Apple OneScanner for Windows, whilst a 300dpi scanner, could not interpolate beyond that resolution, and the Logitech ScanMan PowerPage for Windows could not go beyond its maximum of 400dpi.

Quality from colour originals

We chose two colour originals for the tests. The first was a colour photocopy test page which was a screened photograph. We chose this to test the effect of Moire curves, which are seen as "noise" patterns on printed output of scanned screened originals. We were surprised to see no evidence of Moire curves in the output that was judged.

What we did see was a colour shift in some samples and a tonal



Logitech's PowerPage for Windows can be used as a single-sheet feeder, or as a hand-held to scan pages in a book

SCANNERS



The AVR8800 skips through its scans quite quickly, and the driver allows advanced image manipulation

The other colour test used an original photograph which had been enlarged to 8in by 12in. Its predominant colours were green, blue and brown — a stark contrast to the screened original which was dominated by white, red and yellow.

The clear winners in this test were the Epson GT-8000 and the Epson GT-6500, which scored, out of a possible 63 points, 58 and 54 respectively. The Logitech ScanMan Colour again came in last with one point. Of the greyscale scanners, it

was the Apple OneScanner and the Caere OmniScan that stole the show.

Quality from greyscale originals

The graphic used for these tests was a greyscale photocopier test page which contained text, lines and 10 boxes of different shades of grey. We chose these boxes to be the focus of our two scans: a 300dpi scan to be printed at 300dpi on our laser printer, and a 600dpi scan to be printed at 600dpi.

Surprisingly, only two scanners

shift in others. The Epson GT-8000 was voted as being the best quality duplication by six of the seven people on the judging panel. At the other extreme, the output from the Logitech ScanMan Colour hand-held scanner was voted as the worst image by six of the seven judges (and second worst by the other). The Logitech output intensified the reds and yellows in the photo and these affected all other colours, so that the green grass had a reddish tinge.

In other output samples, the UMAX UC630 and the UMAX UC1260 delivered a slight orange tinge across the image. The default settings for contrast and brightness on the Canon IX-4015 driver were too low because the resulting image was darker than the original and there was less contrast between the colours. The Epson GT-6500 had exactly the opposite problem, delivering colours which were washed out. The Sharp JX-325 turned shades of red into shades of orange. We believe that with a bit of patience in fine-tuning the settings in the drivers, most of these problems could be overcome.

Of the greyscale scanners, the Apple OneScanner and the Caere OmniScan hand-held impressed the most. The Logitech ScanMan PowerPage for Windows and the Logitech ScanMan EasyScan fought out the race for last place, both delivering unsatisfactory results.

PC WORLD

REPORT CARD

Flat-bed colour scanner

AVR8800

CRITERION	SCORE
Performance	Good
Faster than average times for OCR and graphics scans.	
Quality from colour original	Very Good
Third best in colour output.	
Quality from greyscale original	Good
Voted best in the 300dpi test, but didn't do as well in the 600dpi test.	
Documentation	Satisfactory
Setup and ease of use	Good
Flexibility of drivers	Very Good
Value	Very Good
Final score	7.5

PRODUCT SUMMARY

Company: Proscan Australia Pty Ltd, PO Box 700, Neutral Bay, NSW 2089.
Phone: (02) 904 1244.
Fax: (02) 904 1099.

Price: \$2,190.

Pros: Amongst the best at the end of the day.

Cons: None significant.

PC WORLD

REPORT CARD

Hand-held greyscale scanner

Caere OmniScan for PC

CRITERION	SCORE
Performance	Very Good
We didn't need to re-scan anything to get satisfactory results.	
Quality from colour original	Excellent
Quality from greyscale original	Satisfactory
Documentation	Very Good
Setup and ease of use	Good
Flexibility of drivers	Satisfactory
Value	Satisfactory
More expensive than competing greyscale hand-helds.	
Final score	6.9

PRODUCT SUMMARY

Company: Performance Sales, Level 4, 23 Berry St, North Sydney, NSW 2060.
Phone: (02) 957 1400.
Fax: (02) 959 3168.

Price: \$670.

Pros: Good quality greyscale output from colour originals; easy to use.

Cons: None significant.

PRODUCT COMPARISON

SCANNERS

impressed the judging panel at both resolutions. The Canon IX-4015 and the UMAX UC630, while not winning either test, came in the top five both times. At the other end of the scale, the Logitech ScanMan PowerPage for Windows came last in both tests.

Documentation

I have already mentioned that users entering the scanner market for the first time should do so with great trepidation. For that reason, we finished up placing a greater emphasis

on the documentation than we first considered would be necessary.

Whilst TWAIN is meant to be a standard, each and every TWAIN driver dialogue box that we confronted during the review was different. Additionally, different interface cards have been used by different suppliers. The most common was the Adaptec 1510 SCSI card, but there was also an Adaptec 1542C SCSI, proprietary SCSI I/O cards and proprietary non-SCSI I/O cards.

With those complications, good

documentation makes the going easier and the output of higher quality.

The best documentation seen in the review was undoubtedly shipped with the UMAX UC630 and the UMAX UC1260 scanners. The illustrations were brilliant, the screen pictures were accurate and relevant, and the documentation fully explained the delicate art of image manipulation to fully exploit the technology of the scanner.

Most of the other scanners came with acceptable documentation that

PC WORLD

REPORT CARD

Flat-bed colour scanner **Canon IX-4015**

CRITERION	SCORE
Performance	Very Good
Quality from colour original	Satisfactory
Quality from greyscale original	Very Good
Documentation	Good
Setup and ease of use	Good
Flexibility of drivers	Very Good
Value	Satisfactory
Final score	6.9

PRODUCT SUMMARY

Company: Canon Australia Pty Ltd, 1 Thomas Holt Drive, North Ryde, NSW 2113.
Phone: (02) 887 0166.
Fax: (02) 888 3650.
Price: \$2,425.
Pros: Good quality from greyscale originals.
Cons: A bit expensive.

PC WORLD

REPORT CARD

Flat-bed colour scanner **Epson GT-6500**

CRITERION	SCORE
Performance	Poor
Quality from colour original	Good
Quality from greyscale original	Satisfactory
Documentation	Good
Setup and ease of use	Good
Flexibility of drivers	Good
Value	Good
Final score	6.0

PRODUCT SUMMARY

Company: Epson Australia Pty Ltd, 1/70 Gibbes Street, Chatswood, NSW 2067.
Phone: (02) 415 9000.
Fax: (02) 417 0077.
Price: \$1,546.
Pros: Good overall output; easy to use.
Cons: Slow with the bi-directional parallel I/O card.

PC WORLD

REPORT CARD

Flat-bed colour scanner **Epson GT-8000**

CRITERION	SCORE
Performance	Excellent
Quality from colour original	Excellent
Quality from greyscale original	Satisfactory
Documentation	Good
Setup and ease of use	Good
Flexibility of drivers	Good
Value	Excellent
Final score	8.3

PRODUCT SUMMARY

Company: Epson Australia Pty Ltd, 1/70 Gibbes Street, Chatswood, NSW 2067.
Phone: (02) 415 9000.
Fax: (02) 417 0077.
Price: \$2,007.
Pros: Amongst the fastest scanners; best quality output from colour originals.
Cons: None significant.

Input to create



SCANMAKER IIsp

The business of the 90's requires technology for the future.

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PRODUCT COMPARISON

SCANNERS

clearly showed how best to use the scanner and TWAIN driver. But the Sharp JX-325, Fujitsu ScanPartner 10 and the Teco/Relisys documentation was totally inadequate.

Setup and ease of use

In nearly all cases, setting up a scanner required opening your PC and installing an I/O card in a free slot on your motherboard. The exceptions were Logitech's ScanMan PowerPage for Windows and ScanMan EasyTouch, which plugged directly into the parallel port.

Many scanners used the Adaptec 1510 SCSI I/O card, which has a set of jumpers to indicate the address in high memory that the card will use. If your system already has a SCSI card to drive the hard disk, be prepared for memory conflicts if both cards point to the same address.

In most cases the software installation of both the Adaptec card and the scanner's TWAIN driver was straightforward. The fun started with one of our test machines which had most of its high memory already allocated to other devices or programs. Then it was a matter of how good the documentation was in explaining what to do in this situation. The documentation for the Sharp JX-325, the Fujitsu ScanPartner 10, and the Teco/Relisys scanners made little or no mention of any potential memory conflicts with the I/O cards that they supplied.

Most installation routines added drivers and modified the CONFIG.



Part of the UMAX range of flat-bed colour scanners. The UC630 in the foreground is fitted with the optional automatic document feeder

SYS file to include the SCSI device. Once the I/O card and the drivers were loaded, all machines were very similar to operate.

Flexibility of drivers

In order to fine-tune your scans, you'll need a scanner with lots of different settings for its TWAIN driver, as well as a good graphics package to spruce things up. All drivers provided the bare minimum of control: image type (line art, greyscale, etc), resolution, brightness and contrast.

In the higher-end scanners — like the AVR8800, AVision 680C, UMAX UC630 and the UMAX UC1260 — there are additional, advanced features. These include being able to apply a colour filter to greyscale scans, scaling of the image in the X and Y axes, multiple half-tone (dithering) patterns, and individual colour (red, green or blue) adjustments.

Value

It is clear that some companies have set their pricing policies correctly,

PC WORLD

REPORT CARD

Flat-bed greyscale scanner with sheet feeder

Fujitsu ScanPartner 10

CRITERION	SCORE
Performance	Very Good
A low error rate for OCR scans.	
Quality from colour original	Good
Quality from greyscale original	Good
Documentation	Poor
Not the worst we saw, but close to it.	
Setup and ease of use	Good
Flexibility of drivers	Good
Value	Poor
Too expensive for what you get.	
Final score	5.9

PRODUCT SUMMARY

Company: Mitsui Computer Ltd, Unit 1, 14 Aquatic Drive, Frenchs Forest, NSW 2086.

Phone: (02) 452 0452.
Fax: (02) 452 0404.

Price: \$3,599.

Pros: A fast performer with good accuracy in OCR tests.

Cons: Expensive; documentation inadequate.

PC WORLD

REPORT CARD

Sheet-feeding greyscale scanner

Logitech ScanMan PowerPage for Windows

CRITERION	SCORE
Performance	Poor
The slowest of the scanners.	
Quality from colour original	Poor
Took last place in output review.	
Quality from greyscale original	Poor
Took last place in output review.	
Documentation	Very Good
Setup and ease of use	Satisfactory
Lacked a pass-through parallel port.	
Flexibility of drivers	Satisfactory
Value	Good
Final score	4.6

PRODUCT SUMMARY

Company: BJE Enterprises Pty Ltd, 124 Rowe Street, Eastwood, NSW 2122.
Phone: (02) 858 5611.
Fax: (02) 858 5610.

Price: \$999.

Pros: Good selection of bundled software; simple to connect; OCR was OK.

Cons: No pass-through parallel port; full scan required even if only part is required; poor graphics quality.

SCANNERS

and others seem to have missed the boat.

It seemed strange that the Apple OneScanner, a 300dpi greyscale scanner, would be more expensive than many of the 600dpi colour scanners. One viewpoint could be that you don't judge on price but rather on "bangs per buck", and given that the Apple's output wasn't bad, it may still attract some attention.

Similarly, the Fujitsu ScanPartner 10, a greyscale scanner with a maximum resolution of 600dpi, is more

expensive than almost everything else in the review.

The Epson GT-8000, on the other hand, a colour scanner with a maximum resolution of 800dpi, seemed to deliver very good results at a very attractive price.

Think before you buy

Scanner technology can be a messy business if you go into it with your eyes closed and your wallet open. But with realistic expectations and a bit of patience — mixed with a dash of luck

from up above — the experience can be very rewarding. Remember you'll need a suitable printer, too, not just a suitable scanner. It's no good matching a 1,200dpi colour scanner with a \$500 inkjet printer.

If you're not comfortable playing with SCSI cards and matching memory addresses, get a referral to a reputable dealer who knows about scanner technology, and ensure that the scanner works with your PC before completing the purchase.

And... good luck.

PC WORLD REPORT CARD

Hand-held greyscale scanner

Logitech ScanMan EasyTouch

CRITERION	SCORE
Performance	Poor
<i>The auto-stitching function can take over half an hour (on a 486DX2-66 machine).</i>	
Quality from colour original	Poor
<i>Came close to last place in output review.</i>	
Quality from greyscale original	Poor
<i>Came close to last place in output review.</i>	
Documentation	Very Good
Setup and ease of use	Good
Flexibility of drivers	Good
Value	Good
Final score	5.0

PRODUCT SUMMARY

Company: BJE Enterprises Pty Ltd, 124 Rowe Street, Eastwood, NSW 2122.
Phone: (02) 858 5611.
Fax: (02) 858 5610.

Price: \$440.

Pros: Good selection of bundled software; cheap.

Cons: Very hard to get good-quality results; poor output quality.

PC WORLD REPORT CARD

Hand-held colour scanner

Logitech ScanMan Colour

CRITERION	SCORE
Performance	Satisfactory
Quality from colour original	Poor
<i>Easily took last place in colour output review.</i>	
Quality from greyscale original	Poor
<i>Came close to last place in the output review.</i>	
Documentation	Very Good
Setup and ease of use	Good
Flexibility of drivers	Good
Value	Good
<i>You don't pay too much — you don't get too much.</i>	
Final score	5.4

PRODUCT SUMMARY

Company: BJE Enterprises Pty Ltd, 124 Rowe Street, Eastwood, NSW 2122.
Phone: (02) 858 5611.
Fax: (02) 858 5610.

Price: \$803.

Pros: A cheap entry into colour scanning.

Cons: High error rate in OCR tests; poor output quality.

PC WORLD REPORT CARD

Flat-bed colour scanner

Microtek ScanMaker IIsp

CRITERION	SCORE
Performance	Very Good
Quality from colour original	Satisfactory
<i>Rated in the middle of the field for colour output.</i>	
Quality from greyscale original	Good
Documentation	Satisfactory
Setup and ease of use	Satisfactory
Flexibility of drivers	Excellent
<i>From a company that does so well in the pre-press scanner market, the quality of the driver is not surprising.</i>	
Value	Good
Final score	6.8

PRODUCT SUMMARY

Company: Kayell, Unit B, 8 Lyon Park Road, North Ryde, NSW 2113.
Phone: (02) 844 8800.
Fax: (02) 844 8811.

Price: \$2,541.

Pros: A good overall performer.

Cons: None significant.

PRODUCT COMPARISON

SCANNERS

Each scanner was connected to a 486DX2-66 with 8Mb of RAM. For software running under Windows, we ran the graphics adaptor at a resolution of 1,024 by 768. All scanners — even those that didn't support colour — were subjected to the same series of tests. For non-colour scanners, the judging panel voted on the greyscale conversion of colour originals.

Output from the greyscale tests was printed on a Lexmark WinWriter 600 printer, and printed at resolutions of 300dpi by 300dpi, and 600dpi by 600dpi, the printer's maximum. Output from the colour tests was printed on the Tektronix Phaser IISDX dye-sublimation printer, which prints at a maximum resolution of 300dpi.

We chose Adobe's PhotoShop as the standard graphics scanning software for all systems, except for Logitech's PowerPage which crashed our PC under PhotoShop, so we used Logitech's FotoTouch Colour software. Other packages were bundled with some of the scanners (see the Features Evaluation, page 122).

Performance

We timed the scanners at a resolution of 300dpi. TWAIN drivers typically give slower scanning times than scanner-specific drivers — but scanner-specific drivers only support certain applications, whereas TWAIN drivers are supported by all TWAIN-compliant software.

Scan quality

The graphics test scans were performed with three test pages: a greyscale test page (containing fine lines and 10 shades of grey), a colour test page and a glossy 8in by 12in colour photo.

The quality of scanning in a graphics environment is a very subjective issue. To eliminate any personal bias, a panel of seven people from the *PC World* team graded the output from each scanner printed at 300dpi. Each output page was labelled only with a number, so no one on the panel knew which scanner had created the graphic.

All scans were performed using the default settings for the drivers.

How we tested SCANNERS

Similarly, print screening was set to "Use Printer's Default Screen". Some scanners have built-in "tone balancing" features, while others rely on the software package to handle this.

OCR

We chose Caere's OmniPage Pro as the standard OCR package for all

systems, although other OCR applications were bundled with some of the scanners (see the Features Evaluation, page 122). The software was set to "ignore fonts and all formatting" and, where possible, to "Auto-brightness with any page" (where the brightness settings could only be adjusted manually, we chose

PC WORLD REPORT CARD

Flat-bed colour scanner

Sharp JX-325

CRITERION	SCORE
Performance	Satisfactory
Average performer in the 300dpi greyscale and colour tests; below average in the 600dpi greyscale test.	
Quality from colour original	Good
Quality from greyscale original	Satisfactory
Documentation	Poor
Setup and ease of use	Satisfactory
Scanner heads unlocked by dip switches.	
Flexibility of drivers	Poor
No TWAIN drivers released at the time of testing (apparently in beta testing).	
Value	Poor
The third most expensive scanner.	
Final score	4.3

PRODUCT SUMMARY

Company: Sharp Corporation of Australia Pty Ltd, 1 Huntingwood Drive, Blacktown, NSW 2148.
Phone: (02) 831 9111.
Fax: (02) 672 1208.
Price: \$3,252.
Pros: None really.
Cons: Expensive; no TWAIN drivers released at time of testing.

PC WORLD REPORT CARD

Flat-bed colour scanner

Teco/Relisys 3530+

CRITERION	SCORE
Performance	N/A
Could not get the TWAIN driver to recognise the scanner on three PCs — a new driver is being tested.	
Quality from colour original	N/A
Quality from greyscale original	N/A
Documentation	Poor
Setup and ease of use	Poor
You have to "exclude" memory yourself, without any help from the documentation; fortunately, a new installation procedure is being tested by Teco. During testing, did not support OmniPage Pro version 5.0.	
Flexibility of drivers	Satisfactory
Value	Good
Final score	N/A
We couldn't give a final score because the scanner would not perform tests.	

PRODUCT SUMMARY

Company: Teco Australia Pty Ltd, 335-337 Woodpark Road, Smithfield, NSW 2164.
Phone: (02) 725 1233.
Fax: (02) 757 1366.
Price: \$1,999.
Pros: Seems to represent good value.
Cons: Documentation inadequate.

SCANNERS

the 50 per cent setting). We set the scanners to scan on their "greyscale" setting rather than "line art", which improved the accuracy of the OCR but penalised their speed. Some scanners, like the Logitech, only permitted OCR scanning on "line art".

The OCR test was performed with two test pages. The first was from the Help Screen section of *PC World* (page 203 in the April issue), which contains multiple font changes, normal, bold and italic char-

acters, a variety of point sizes and more than one column. The page also has a yellowish background tint.

We knew this would be a very demanding test for the scanners because the text had plenty of "<Ctrl> + <Alt> + <Delete>" sequences, but this is the sort of OCR work for which a scanner could be purchased. This test was not performed to test the accuracy of the OCR software, but rather how clearly the scan "read" the text. We also photocopied the original page to

see if a white background would improve the accuracy of the scan.

The second test page was a single-column page from Microsoft Word 6.0 for Windows, printed on a Lexmark WinWriter 600 in the Century Schoolbook TrueType font. The aim of this test was to see how well "non-standard" fonts (ie, other than Times Roman, Helvetica and Courier) are recognised.

All OCR scans were run at 300dpi, and we recorded the number of errors that appeared after each scan. ■

PC WORLD

REPORT CARD

Flat-bed colour scanner

Teco/Relisys 6530+

CRITERION	SCORE
Performance	N/A
Could not get the TWAIN driver to recognise the scanner on three PCs — a new driver is being tested.	
Quality from colour original	N/A
Quality from greyscale original	N/A
Documentation	Poor
Setup and ease of use	Poor
Fortunately, a new installation procedure is being tested by Teco.	
Flexibility of drivers	Satisfactory
Value	Satisfactory
The most expensive scanner but has the equal-highest scanning resolutions.	
Final score	N/A
We couldn't give a final score because the scanner would not perform tests.	

PRODUCT SUMMARY

Company: Teco Australia Pty Ltd, 335-337 Woodpark Road, Smithfield, NSW 2164.
Phone: (02) 725 1233.
Fax: (02) 757 1366.
Price: \$4,005.
Pros: Some might have become apparent if we could have run our tests.
Cons: Documentation inadequate.

PC WORLD

REPORT CARD

Flat-bed colour scanner

UMAX UC630

CRITERION	SCORE
Performance	Satisfactory
Amongst the slowest of the scanners.	
Quality from colour original	Satisfactory
Quality from greyscale original	Very Good
Documentation	Excellent
A model for all others.	
Setup and ease of use	Excellent
Flexibility of drivers	Excellent
Value	Good
Final score	7.5

PRODUCT SUMMARY

Company: Computer Enterprises of Australia Pty Ltd, Level 7, 122 Arthur St, North Sydney, NSW 2060.
Phone: (02) 957 3476.
Fax: (02) 957 3446.
Price: \$1,735.
Pros: Fantastic documentation; tremendous control from the TWAIN driver.
Cons: Not so fast.

PC WORLD

REPORT CARD

Flat-bed colour scanner

UMAX UC1260

CRITERION	SCORE
Performance	Satisfactory
Amongst the slowest of the scanners.	
Quality from colour original	Good
Quality from greyscale original	Good
Documentation	Excellent
A model for all others.	
Setup and ease of use	Excellent
Flexibility of drivers	Excellent
Value	Satisfactory
For the resolutions you can get, the value may be "Good", but those resolutions may be over-kill for corporate and SOHO users.	
Final score	7.2

PRODUCT SUMMARY

Company: Computer Enterprises of Australia Pty Ltd, Level 7, 122 Arthur St, North Sydney, NSW 2060.
Phone: (02) 957 3476.
Fax: (02) 957 3446.
Price: \$3,840.
Pros: Fantastic documentation; tremendous control from the TWAIN driver.
Cons: Not speedy; price.

PRODUCT COMPARISON

SCANNERS

FEATURES EVALUATION

Scanners

	Apple OneScanner	AVision AV680C	AVR8800	SOHO BEST BUY	Canon IX-4015	Epson GT-6500	BEST BUY	Fujitsu ScanPartner 10
Type of scanner (flat-bed, hand-held, sheet-feed)	flat-bed	flat-bed	flat-bed	hand-held	flat-bed	flat-bed	flat-bed	flat-bed with sheet-feeder
Interface	Adaptec SCSI	Adaptec SCSI	Adaptec SCSI	proprietary I/O card	proprietary SCSI	bi-directional parallel	Adaptec SCSI	Adaptec SCSI
Colour or greyscale	greyscale	colour	colour	greyscale	colour	colour	colour	greyscale
Number of scan passes	1	3	3	1	1	1	1	1
Maximum scan resolution (dpi)	300 x 300	800 x 800	800 x 800	400 x 400	400 x 400	300 x 300	400 x 400	300x300
Maximum resolution (dpi) with interpolation	300 x 300	1600 x 1600	1600 x 1600	400 x 400	400 x 800	600 x 600	800 x 800	600 x 600
Options available (S)	N/A	N/A	ADF, Transparency unit	N/A	ADF	ADF Transparency unit	ADF Transparency unit	N/A
Bundled software	OFOTO graphics	Image Pals	EasyScan	FaxMaster Omnipage Direct, Image Assistant	OFOTO graphics	Epson Scan!	Epson Scan!	Textbridge OCR
Weight	10.5kg	8.5kg	6.8kg	<1kg	6kg	9kg	12kg	13.5kg
OCR								
Time to scan (min:sec)	0:13	0:20	0:14 (6)	N/A (3)	0:14	2:35	0:07	0:40
Magazine: accuracy (no. of errors in 707 words)	39	46	46	78	44	40	44	34
Did we have to use photocopies page?	no	yes	no	yes	yes	no	no	no
Laser page: accuracy (no. of errors in 693 words)	0	1	0	6	0	2	1	0
Graphics								
Time to scan in greyscale at 300dpi	1:30	0:48	0:30	N/A (3)	0:38	2:26	0:56	0:30
Time to scan in greyscale at 600dpi	N/A (7)	3:21	5:32	N/A (3)	3:00	10:30	4:00	2:37
Time to scan in colour at 300dpi	N/A (2)	2:40	3:46	N/A (3)	2:21	13:07	1:37	N/A (2)

(1) Maximum resolution is 400dpi

(2) Greyscale scanners did not have colour graphics drivers

(3) The time for hand-scanners is inappropriate to measure, since the speed is controlled by the operator rather than a mechanical device

(4) Can be used as a motorised hand-held for scanning bound items by removing the top of the scanner

(5) ADF = Automatic Document Feeder

(6) Supplied TWAIN driver did not run properly in OmniPage Pro, so HP ScanJet driver used

(7) Maximum scan resolution is 300dpi

(8) TWAIN driver not released at time of testing

(9) TWAIN driver did not support OmniPage at time of testing

(10) Could not get scanner to work on three of four PCs — then the fourth PC failed

SCANNERS

Logitech ScanMan PowerPage for Windows	Logitech ScanMan EasyTouch	Logitech ScanMan Colour	Microtek ScanMaker IIsp	Sharp JX-325	Teco / Relisys 3530+	Teco / Relisys 6530+	UMAX UC630	UMAX UC1260
sheet-feed (4)	hand-held	hand-held	flat-bed	flat-bed	flat-bed	flat-bed	flat-bed	flat-bed
parallel port	parallel port	proprietary I/O	proprietary SCSI	proprietary SCSI	proprietary SCSI	proprietary SCSI	proprietary SCSI	proprietary SCSI
greyscale	greyscale	colour	colour	colour	colour	colour	colour	colour
1	1	1	1	1	1	1	3	3
400 x 400	400 x 400	400 x 400	300 x 600	300 x 300	300 x 600	600 x 1200	300 x 600	600 x 1200
400 x 400	400 x 400	400 x 400	600 x 600	600 x 600	1200 x 1200	2400 x 2400	1200 x 1200	2400 x 2400
N/A	N/A	N/A	ADF, Transparency unit	N/A	ADF, Transparency unit	ADF, Transparency unit	ADF, Transparency unit	ADF, Transparency unit
Logitech FotoTouch Colour, WinFax Lite, OmniPage Direct OCR	Logitech FotoTouch Colour, OmniPage Direct OCR	Logitech FotoTouch Colour, OmniPage Direct OCR	PhotoShop Limited Edition	PhotoShop	Image Pals	Image Pals	Image Pals and Recognition OCR	N/A
1.4kg	<1kg	<1kg	8.9kg	7.0kg	8.1kg	8.1kg	8.1kg	8.6kg
0.32	N/A (3)	N/A (3)	0.18	N/A (8)	N/A (9)	N/A (9)	0.15	0.17
36	46	61	31	N/A (8)	N/A (9)	N/A (9)	46	30
yes	no	yes	yes	N/A (8)	N/A (9)	N/A (9)	no	yes
1	9	6	0	N/A (8)	N/A (9)	N/A (9)	1	1
5:32	N/A (3)	N/A (3)	0.25	1:40	N/A (10)	N/A (10)	2:45	2:50
9:30 (1)	N/A (3)	N/A (3)	2.38	5:33	N/A (10)	N/A (10)	7:25	7:19
N/A (2)	N/A (3)	N/A (3)	2.07	3:50	N/A (10)	N/A (10)	8:55	8:48

Electronic Publishing

**AT SOME TIME OR OTHER, WE'VE ALL
BEEN VICTIMS OF THE AMATEUR DESKTOP
PUBLISHER. HOW DID IT ALL BEGIN?
AND WHAT ARE THE CURRENT WEAPONS
ON THE MARKET?**

By Neale Morison

When electronic publishing took off in the mid 1980s, it was a revolution. No longer was the authority and impact of the printed word restricted to an ever-diminishing circle of media barons. No longer was the persuasive power of graphics, designer fonts and flexible layout limited to an elite.

Affordable laser printing and photocopying meant that anyone could produce a newsletter, brochure or pamphlet to a more-or-less professional standard. Soft-font technology meant that you could create a full-page ransom note without ever selecting two characters from the same font. You could, and you did — and it was up to the readers to work out what it said.

To people who couldn't draw a

straight line, computer graphics gave not only straight lines but rectangles, circles and strange, endlessly tweakable curves. There was a sharp increase in the appearance of gratuitous geometric shapes in computer-generated documents. Clip art collections provided the longed-for ability to intersperse inappropriate line drawings throughout communications, for readers to puzzle over long after absorbing the original message.

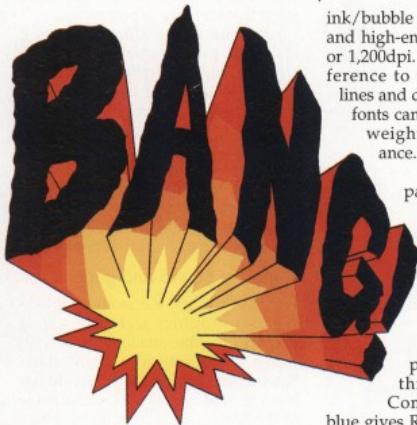
Electronic publishing brings the battle between content and form right to the doorstep of every computer user. In the wrong hands it can result in publications over-designed to the point of illegibility — but used wisely it can be a force for good, effective communication.

The first frenzy has settled, but the revolution continues. Graphics and publishing software have expanded to provide more and more power for creating vivid, arresting images. Electronic publishing now spans the full range of publishing requirements, from the black-and-white flyer to the glossy colour magazine, from stark no-nonsense technical manuals to glittering marketing materials.

Technical demands have been made

With the advent of the graphical user interface, publishing software began to aim for the "What you see is what you get" (Wysiwyg) ideal. In its most

IS IT HOLDING US TO RANSOM?



A meaningless piece of clip art. Looks good though, doesn't it?

simple terms, the idea was to let you manipulate, on screen, an exact copy of the page as it would appear when printed. That goal is a difficult one to reach because of the fundamental differences between monitor and paper technologies. Monitor resolution, at 100 dots per inch (dpi) or less, has always been much lower than printer resolution: low-end laser printers and high-end colour systems offer 300dpi, dot matrix and

ink/bubble jet systems offer 360dpi, and high-end laser printers offer 600 or 1,200dpi. This can make a big difference to the appearance of fine lines and dot patterns. The serifs on fonts can completely change their weight and aesthetic appearance.

Reproducing colour is a particularly difficult feat, but as colour printers are getting cheaper it's no longer just a high-end publishing requirement.

Monitor technology uses three colours of phosphor dot at each pixel position to generate three colours of light. Combining red, green and blue gives RGB additive colour technology. The light that a sheet of paper absorbs determines the colour it reflects. Absorbing red creates cyan, absorbing green creates magenta, and absorbing blue creates yellow. Those colours, with the addition of black, give CMYK subtractive colour technology. Not only are the technologies fundamentally different, but every video card/monitor combination, and every printer/paper combination has different characteristics. Electronic publishing systems have to provide a way of calibrating the software, not just to the equipment but to the user's eye, so that what you see is as close as possible to what you get.

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Electronic publishing systems have to provide an interface for making it very easy to manipulate images on a page. Publishing is the last stage in a creative process, and usually waits until the other processes of information gathering, editing and approval are completed. There's never enough time and it has to be done quickly and reliably.

Most desktop publishing packages use a "frame" approach. You create sizeable and movable frames on the page, into which you insert text and graphics. In more recent packages frames can be a variety of shapes, but traditionally they're rectangular. There's a common pasteboard approach, in which an image of the page is surrounded by a pasteboard area, which you can use as a temporary holding area for cutting and pasting objects such as frames, text and graphics.

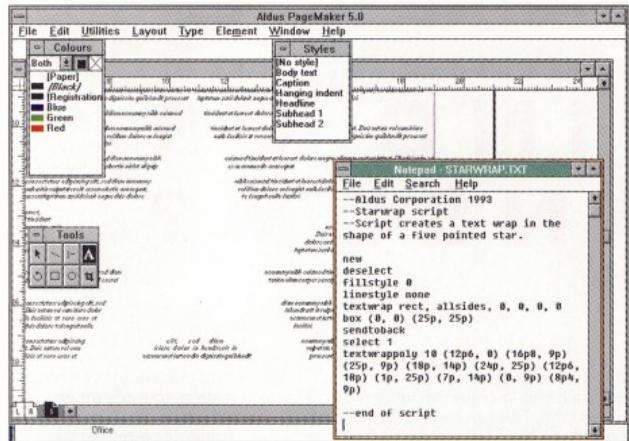
Most packages have embraced a tool bar or floating menu, which provides quick access to the properties of a selected object. Using the tool bar, you can change properties such as font name and size, line width, colour, alignment and many other features, using pure point-and-click without resorting to the main menu system or the dreaded keyboard.

Many packages are offering special, fast text editing features, including a spell checker and thesaurus so you don't have to rely on a word processor.

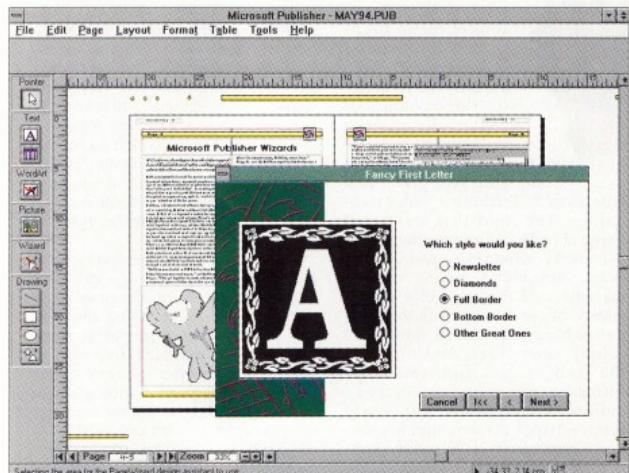
Wysiwyg publishing packages ▶

FEATURE

ELECTRONIC PUBLISHING



PageMaker 5.0 has floating menus, a scripting language and text-wrap around irregularly-shaped objects



Microsoft Publisher's wizards lead new users through a design process — such as creating a Fancy First Letter with WordArt — then do the work and demonstrate how it's done at the same time

typically repaint the screen after each minor change, and if it's a complex page — full of bitmaps, vector graphics and fancy fonts — that takes power. While such packages may work on low-end machines, they work best with lots of memory and speed. If you skimp, you spend your working life waiting for the screen to redraw.

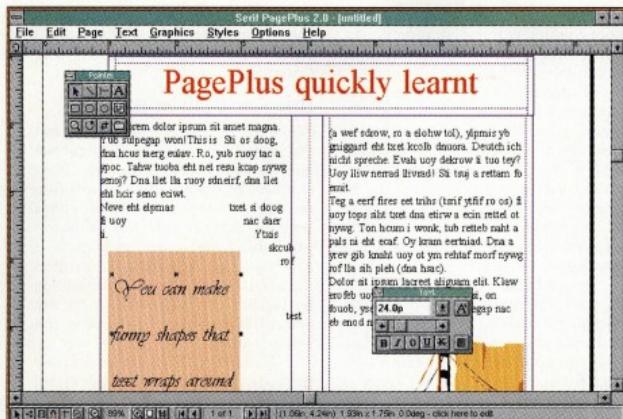
Beyond the simplest manipulation of text and image, there's a lot of technology and a lot of art to laying out a page in a pleasing, clear way that invites reading. Sophisticated publishing packages try to provide access to this technology with features such as automatic kerning, tracking, justification and hyphenation that embody expert skills.

As the revolution continues, elaborate graphics have become *de rigueur*. Publishing packages have to be able to import a large variety of bitmap and vector graphics, and, ideally, manipulate them. Both the Windows and Macintosh environments cater to this need, by permitting several applications to run simultaneously, and allowing cutting and pasting between them — but once again it takes a lot of power.

A market bound and gagged

For many years, electronic publishing and graphics were the strong point of the Macintosh, with its well-integrated graphical user interface. Since Windows 3.0, the PC world has been mounting a serious challenge to the Macintosh. Electronic publishing systems that began on the Macintosh include PageMaker and QuarkXPress, both of which are now available as Windows applications for the PC. Corel Corporation — creator of the mainstay PC graphics package, Corel Draw — bought Ventura Publisher, the widely-used PC desktop publishing package. An integrated combination has been released as the Corel 5 Suite. These packages can be considered as mid-range to high-end applications.

Which platform is better? Opinions vary. According to Ben Browning of Status Graph in Sydney, high-end electronic publishing is mainly done on the Macintosh



PagePlus is a low-priced package which handles colour separations and text-wrap around irregularly-shaped objects

because it's more integrated as a graphics machine. "Who knows? — Windows 4 might make some difference," he said.

The PowerPC chip has given a boost to the power of the Macintosh platform, according to Browning, and there are already graphics applications running native on the PowerPC chip and many more to come.

According to Brian Nestor, director of Melbourne-based Solutions by Design, the Macintosh had about 70 per cent of the publishing business, but the PC has got a very high percentage of the higher end of the market.

"The very high end goes to Unix, beyond the PC and Mac," said Nestor. "Then we're talking very high-end software and hardware. Of the service bureaus we deal with, I don't know any that don't have PCs. Some of them are starting to get DEC Alpha systems."

The low end of town

Word processors don't really qualify as low-end desktop publishing systems. Word processors concentrate on efficient editing and provide a

few layout features, while publishing packages concentrate on layout and sacrifice powerful text editing.

At the low end of the PC range are systems like Microsoft Publisher and PageMaker Classic. Priced around the \$200 mark, these systems offer entry-level publishing. You can do more than a word processing package, but you can't create long or extremely complex documents.

Microsoft Publisher is available in version 2.0 and uses a frame and paste-up metaphor. It is very much an introductory publishing tool: it pops up tips when you first use a technique, and wizards help users create new documents and help introduce techniques. Microsoft Publisher is an OLE 2.0 client and uses OLE 2.0 server applications to provide services such as charts, a table editor and a WordArt text effects editor. It is well integrated with Microsoft Word and preserves much of the formatting of imported documents. Microsoft Publisher includes a spell checker and search-and-replace facilities, and handles colour but can't do colour separations. On a 486 system, Microsoft Publisher can handle small docu-

ments without elaborate graphics. Publisher is included in the Microsoft Office Pack currently available.

PageMaker Classic is a cut-down version of PageMaker, with features such as a table editor, and text editor with spell checker and search-and-replace facilities. It comes with 35 templates, and has a floating style box and floating menus for easy editing of object properties.

A recent entrant in the low-end PC publishing arena is PagePlus, which claims to offer considerably more than other low-end packages. One feature unusual in a low-end package is four-colour printing and film separations. It also allows rotation of text and graphics. A bundled TypePlus package lets you create text in circles and spirals, a feature of particular interest to designers who like to conceal their meaning from readers.

The high end of town

At the higher end of the PC market, the main contenders are Quark XPress and PageMaker, both of which are priced over \$1,400. Colour magazines are typically produced using one of these systems. Technical documenters lean toward Ventura or high-end products like FrameMaker.

A first look at QuarkXPress 3.3 for Windows appeared in *PC World* June. According to users who have tried both versions, the Windows version of QuarkXPress is very similar to the Macintosh version.

The system includes the EfiColour XTension colour calibration system. QuarkXPress extensions provide a way of modifying the core functionality of the system for specific needs. Other XTensions include table and equation editors.

QuarkXPress lets you open multiple documents; create documents up to a theoretical limit of 2,000 pages; group items for editing; nudge items with arrow keys (very handy for fine adjustments); anchor items so they remain associated with specific text; and rotate and skew text, pictures and lines in .001 degree increments. Font sizes can be specified from two to 720 points in .001 point increments. You can print ▶

Tools of the trade**Low-end packages**

PageMaker Classic
Price: \$199
Dataflow
Phone: (02) 310 2020

Microsoft Publisher
Price: \$199
Microsoft Australia
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PagePlus
Price: \$149
Reckon Software
Phone: (02) 550 2666
Software By Mail
Phone: 1 800 809 546

High-end packages

QuarkXPress 3.3
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Phone: (02) 452 0452

PageMaker 5.0
Price: \$1,445
Aldus Corporation
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Dataflow
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Corel Draw Suite, including Ventura 5
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Tech Pacific
Phone: (02) 697 8666

Corel Ventura 5.0
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process separations and plates for spot colours, with registration marks, using either DCS or OPI colour separation formats.

PageMaker 5.0 provides multiple document editing, rotating and skewing of text and graphics in 0.01 degree increments, and horizontal and vertical reflection. A control palette lets you precisely adjust the position of objects by entering position numbers, and lets you anchor an object by one of its handles before rotating it.

PageMaker 5.0 on the PC introduces interruptible screen redraw: instead of waiting while the screen redraws after each action, you can perform another action, saving time and frustration. Maximum zoom is 800 per cent and there's built-in process colour separation.

Corel Ventura 5 will be bundled with the Corel Draw Suite and also sold separately. It wasn't available in the first release of the Corel Draw Suite, but should be out soon, at which point purchasers can redeem their Ventura coupons.

Ventura takes a different approach to file management. A small chapter file points to multiple text and graphics files — in other systems, the chapter or publication is a monolithic file that can grow very large. While this multi-file feature is retained in Ventura 5.0, there are additional file management features to cope with it.

There's drag-and-drop between Ventura and Corel Draw, and both are OLE 2.0 clients and servers, allowing many files to be embedded. Ventura 5.0 makes use of the Corel graphics engine to allow text rotation and fractal fills. Ventura 5.0 has a redesigned Windows interface, with Corel's roll-up floating palette system. Management of large documents is improved with publication-wide marking, cross reference and index entries. Text and graphics can be rotated in 0.1 degree increments, and there's colour separation and a built-in colour calibration system.

Corel CEO Michael Cowpland claims that Ventura takes about 40 per cent of the total high-end publishing market.

"We've got close to 60 per cent of the PC market, and that's at least twice as big as the Mac market," said Cowpland.

They'll do a job for you

While it may be convenient to lay out publications in-house, you might not have or want all the equipment, from scanners to colour printers and film recorders. There are plenty of service bureaus that can take your desktop publishing and graphics files, and give you film, bromides or printed material. Brian Nestor of Solutions by Design estimates that there are about 100 bureaus in Melbourne and 140 in Sydney.

WYSIWYG Design in Sydney provides a full range of services, including scanning, film output and high-quality colour printing. According to Michael Tan of WYSIWYG, people can supply their files in native file formats such as PageMaker, QuarkXPress or Illustrator. To make sure what you get is what you want, Tan suggests some simple preparation.

"To start with, you must do test prints on your own laser printer," said Tan. "If it doesn't work there, there's no chance of us hoping to print anything. If it looks wrong there it will look wrong on bromides. Send the laser printout to us as a guide."

There are other pitfalls, including the problem of typeface serifs losing their impact at the finer resolution of the imagesetter.

"The same font could have three or four different production dates," said Tan. "There could be slight differences, not known to the designer, that could cause type re-flow [words repositioning themselves on the page]."

Don't take hostages

To create appealing layouts, you can choose from a range of electronic publishing solutions. The revolution has brought unprecedented publishing power to the desktop, but as visual impact becomes ever more potent, there's always the danger of losing some of the message in the medium. ■

Ergonomics

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CORDLESS MOUSE
— p140

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You have tight neck muscles, a splitting headache and stabbing pains in your wrists — ergo, it's time to change your workplace ergonomics

By Neale Morison

Get a **STRAIGHT BACK to work**

You've escaped from the galley. No more do your ears ring to the incessant booming of those drums, no more are you compelled to strain your screaming muscles against the massive oars in the service of a cruel and ruthless master. You're free — free to loll idly in your own little craft as you skim lightly across the sunlit waters of self-employment.

So what do you do? You wedge yourself into a cramped room for 16 hours a day, chain your foot to the computer desk and proceed to self-inflict all known forms of repetition strain injury (RSI), while never escaping from a guilty sense that the cause of all your problems is that you're simply not working hard enough.

Does this picture of a neurotic, obsessed SOHO slave fit you? Or did you get that shooting pain in your left shoulder from playing Doom?

Ergonomic etiquette

If you're the one responsible for your own working conditions, you may be your own worst employer. The great RSI scares of the eighties have quietened down a little, but that's not because the risk has miraculously vanished. The lessons learned from those days have to be applied continuously, and to do so takes time, money and care. The general name

for the musculoskeletal injuries associated with work practices is Occupational Overuse Syndrome (OOS). This includes RSI, the general term for problems arising from frequent repeated movement, as well as muscle fatigue arising from maintaining a static muscle load for too long.

To create conditions in which you won't damage yourself as you work, you have to take care to select your furniture, arrange your equipment, monitor your posture and schedule breaks from working.

There's general agreement on how to create such ideal conditions, and the information is available from a great many sources. You can get information from the Federal WorkSafe Authority, the State WorkCover Authority of NSW, the Public Sector Union, on-line information services such as the Internet and CompuServe, and computer manufacturers such as Compaq.

STRESS!!!

There are also books available, such as *Increasing Productivity and Profit Through Health and Safety* by Maurice Oxenburgh. Oxenburgh has been researching and writing about ergonomics for 15 years. According to him, the outbreak of RSI in the 1980s was not a fashion, but a combination of computers and stress.

"When it was an epidemic in the ▶

eighties, companies were introducing computers and people were worried they would be losing their jobs," said Oxenburgh. "People were spending more and more time on computers. They were under constant stress — there was the stress of job insecurity, de-skilling and working in the same place all the time. The normal reaction to stress is that your neck tightens up."

Muscle tightness, caused by the

stress of the newly-emerging technology, added to the more restricted physical conditions and the frequently-repeated small movements of the computer user to result in a wave of injuries. An epidemic of legal activity followed, and employers rushed to create conditions which would minimise the risk of both injury and legal action. Changes to working conditions and the heightened awareness of risk reduced the

number of injuries and claims. But just how much the situation has improved is hard to determine, because of the difficulty in obtaining focused data.

"There are still people getting injured," said Oxenburgh. "The collection of data is atrocious."

"The way we collect our statistics is based on musculoskeletal injuries," said a representative of the Federal WorkSafe authority. "You can't tell from those statistics whether injuries are computer-related or not."

While local statistics are not readily available, only the most sceptical people doubt that injuries did occur in the past and continue to happen today. The Occupational Health and Safety Act 1983 (NSW) is intended to ensure that employers maintain safe equipment, use equipment and materials safely, provide safety and health information to employees, and maintain a safe workplace. However, there's a catch if you're both the employer and the employee because you can't very well sue yourself. You're also liable for the health and safety of any employees or visitors in your own office.

Break it up

According to Maurice Oxenburgh, the RSI risk is greatest for those who do the most repetitive, uninterrupted work. People who work in bursts are less at risk.

"RSI is an upper limb problem, from the neck to the fingertips," said Oxenburgh. "When people talk about RSI, they're typically talking about people who work on directory enquiries, or do data entry. They're people who've been at it highly-intensively all day. But if you're reasonably well set up you should have no problems," he said.

People who type very quickly for long periods may also be at risk. Oxenburgh recommends breaks and varying the tasks.

"I type the same as I write, 17 to 20 words a minute," said Oxenburgh. "I've been sitting here four or five hours, and I've been editing and proofreading. I've also been down to get a cup of tea, and been talking on

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PUBLICATIONS

Increasing Productivity and Profit Through Health and Safety (ISBN 1 86264 264 8)
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Price: \$92 over the counter at 15th floor, 31 Market St, Sydney, or contact CCH International
Phone: (02) 261 5906

A Guidance Note for the Prevention and Management of Occupational Overuse Syndrome in Keyboard Employment

Price: \$7.95 from Commonwealth Bookshops

Health and Safety in the Office
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There's also free information available from the Federal WorkSafe Information Section
Phone: 008 252 226 or (02) 565 9555
You can arrange to have your premises assessed for work safety, but there is a fee involved. You can also obtain information from the WorkSafe library situated at 92 Parramatta Road, Camperdown, NSW

HARDWARE

For information on telephone headsets, try George Noar East Coast Telephones
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Prices for good headsets range from \$249 for a Crest II, to \$375 for a Plantronics single earmuff set, to \$440 for a two earmuff stereo set. You may also need a suitable handset, such as the Telecom T200HS, which retails for around \$150.

Cyber-Trunk

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It is the core of a proposed range of case goods for the SOHO and corporate office, designed by locals Scott Weston and Robert Lisztes and submitted in a competition organised by Herman Miller Works, the American furniture manufacturer.

In analysing the sociological/technological trends of today's work environment, the designers have in fact drawn inspiration from the *tansu* and *funa-dansu* mobile storage chests of the Edo and Meiji periods of 17th and 18th century Japan. The result is a modular approach that allows maximum flexibility and security for the way we will work tomorrow.

Weston and Lisztes envisage a near future of SOHO workers and itinerant project-specific work teams "in telecommunication with everyone everywhere". This is when wireless communications will reign and we will be free of the spaghetti-like tangle of electrical cabling. Importantly, the ergonomics appear sound: fully-adjustable seating, individual task lighting and, obviously,



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the phone." It's important to change position regularly, and move around the office.

"It's when people sit still for eight hours that they get RSI," said Oxenburgh.

"I'm standing to talk to you. I've been sitting the whole morning. Physically move the body: for example, you shouldn't have a chair with arms because that tends to fix you in position."

This can mean rearranging the office to make it, in a sense, less efficient.

"Organise your office so you have to keep changing position," said Oxenburgh. "Organise it so you do have to stand up. Definitely move around. I've got one desk for writing,

one desk for the computer. It's better to put the computer in a separate area, rather than trying to integrate it with everything else. Buy another desk."

Oxenburgh has firm views on the appropriate height for the keyboard.

"Put your feet flat on the ground. Adjust your chair to the level where the undersides of your thighs are not resting on the chair. If your thighs are compressed you can have circulation problems. The weight should be on your bottom, not your legs."

"Then put your elbows down at your side. The middle row of keys should be about level with the tip of your elbow. This means that the desk

has to be lower than almost any desk you can buy. Most desks are 700 to 720mm high, which is far too high for most people. With your shoulder hanging properly, your wrist shouldn't be bent too much."

Using Oxenburgh's system, you may find you need a keyboard height of 630mm or less, and a desk of 600mm or less in height. These recommendations are based on the mechanics of the body, analysis of the injuries people have sustained and their relationship to the furniture they use, according to Oxenburgh.

Setting a computer monitor at the right position is like creating the ideal conditions to read a book.

Continued page 136 ▶

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If you've decided to reach out beyond the common 14in monitor size, you're probably enjoying all that extra screen acreage. But you've probably also noticed that no matter how big your monitor, they all cause glare and reflection in the wrong lighting conditions, and that can be responsible for some mean headaches.

To ease the pain, NEC has implemented OptiClear on its new 5FGp (17in) and 6FGp (21in) MultiSync monitors. The OptiClear surface is similar to the laminated coatings on ski goggles and bonded panel displays. It is claimed to eliminate glare and reflection and provide greater viewing clarity, thus reducing eye strain.

Also on the ergonomic front, the cases of NEC MultiSync monitors are made from recyclable plastics which do not contain PBDE (polybrominated diphenylethers that emit harmful vapours if they get too hot), and all the monitors sit on tilt-swivel bases so they can be adjusted to the best viewing angle.

The MultiSync 5FGp and 6FGp have recommended retail prices of \$2,836 and \$5,466 respectively.

NEC Home Electronics
Phone: (02) 868 1811



The MultiSync 6FGp with OptiClear coating

head, neck training



Sit up straight and place your hands on your neck behind your head with the elbows pointing outwards. Move your head slowly forward and try to touch your chest with your chin. Remain seated upright.

Repeat at least 5 times.

You can review the exercise by keying Start training. You should leave the computer during the break. An audible signal will sound when the break is over.



PC-Fit provides ergonomics information, exercise training, and supervises user-defined work pauses

From page 133

"Position it in a convenient way so that you can read it without twisting or turning," said Oxenburgh. "Be careful not to look into direct sunlight. Sit parallel to a window, not facing one, and don't have a lamp shining directly on the screen. People should remember that the amount of light emitted by the screen varies according to the time of day, which is the ambient light. Be very careful you don't get reflections on the screen, and make sure your screen is adjustable. Fortunately, modern computers have much better screens than 10 years ago."

Aching to work

The Public Sector Union supplies a kit on its teleworking award, with a number of checklists that indicate the important features of a working environment.

- A good chair features a stable, five-legged base, with adjustable seating height, a padded seat with a curved front, an adjustable backrest and possibly footrests.
- Teleworkers may use headsets

which must be comfortable, and regular typists may need document holders, positioned at the same optimum level as the computer monitor.

- The computer monitor should have a stable, non-flickering screen, adjustable contrast control and screen angle.
- The keyboard should have a separate numeric pad.
- Lighting is important: natural light is best but should be controlled, for example by a venetian blind, to avoid glare. You need adequate overhead lighting, not excessively bright, and a separate task light may also be necessary.
- Excessive noise should be avoided.
- It's advisable to take short pauses from work, to give your body a rest from repetitive actions and give you a chance to use your muscles in a different way.

According to WorkSafe Australia, it's generally accepted that short and frequent breaks are preferable to longer, less frequent breaks. This prevents fatigue rising to a high level and maximises the rate of recovery ▶

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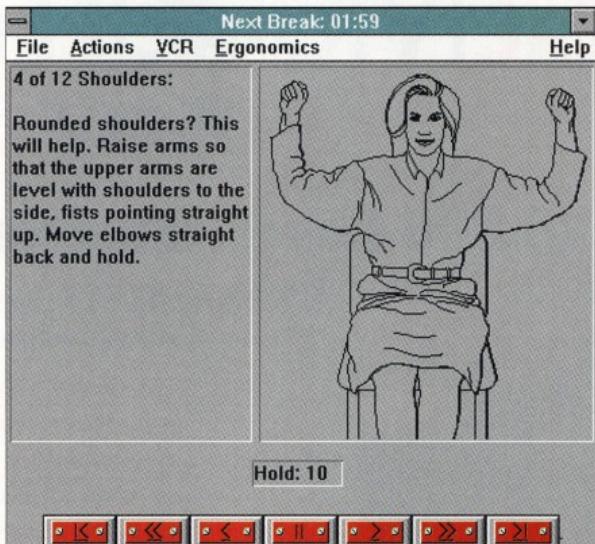
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The StressFree demo, downloadable from CompuServe, shows how to perform shoulder stretches at your desk to ease muscle strain

fatigue — recovery lags as a break continues.

The WorkCover authority has produced a brochure on Health and Safety in the Office. It includes guidelines on temperature (recommended 21 to 24 degrees Celsius in summer) and humidity (40 to 60 per cent). Ozone concentrations from photocopiers should be below the Australian Exposure standard of 0.1 parts per million, but you can smell it at lower concentrations. (By the way, your photocopying doesn't help to fill the hole in the ozone layer because ozone breaks down into oxygen very quickly.) Also, don't place photocopiers and printers right next to your workstations.

Plants can reduce levels of harmful substances such as formaldehyde and benzol vapours, and carbon monoxide. Recommended plants include English ivy, Mother-in-Law's tongue, corn plant, Madonna lily and Chinese evergreen.

Take frequent short breaks and perform whatever movement relieves muscle fatigue. Shrugging shoulders is recommended and stretching exercises are good, but should be performed without bouncing or overstretching.

In Compaq's *Beyond Setup* guide for its Contura Aero notebook family there are recommendations for creating a comfortable work environment and correct positioning of equipment. It suggests that you keep your elbows close to your body when using a keyboard, and minimise bending your wrists up. Do not angle your forearms upward; instead, keep them parallel to the floor as you type. Be sure to leave plenty of room to move your mouse, and make sure your chair supports your lower back.

A painless PC

How do you fight computer-related injury? With a computer program. There are several office ergonomics

programs available that provide information, and monitor keyboard and computer use.

One is StressFree, a Windows program from LifeTime software. You can download a demonstration version from the CompuServe Windows Shareware forum. The demo has diagrams of shoulder exercises, ergonomics checklists for posture, chair, workplace and monitor, and shows how the program sits iconised in the background under Windows, monitoring for excessive keyboard activity and popping up at intervals to coach you through an exercise program.

Another demo program, downloadable from the CompuServe Good Health Forum, is PC-Fit. It has similar features as StressFree and comes in DOS, Windows and Macintosh versions.

The Internet yields lots of information on ergonomics, including an RSI.FAQ (Frequently Asked Questions) file that explains much of the terminology and provides nonsense suggestions for avoiding stress. One good point this file makes is that you need to relax, and be sleeping well and generally healthy to avoid these problems. The RSI.FAQ file is in the news.answers newsgroup and is available from many other areas too.

The price of poor posture

It's hard to take every single piece of well-meaning advice. If you find yourself constantly fussing with tape measure, protractor, light meter, decibel counter, theodolite, compass and astrolabe, you may be overreacting. Try to relax — and if it hurts, consider the possibility that you shouldn't be doing whatever is causing the pain.

Eternal vigilance is the price of staying healthy. If you don't create an ergonomically well-designed environment in your home office, you may think you can get away with it by doing less work. But take care — you may feel guilty about neglecting ergonomics, that guilt may cause stress, which may translate into muscle tension, which in turn may combine with your bad posture and shoddy work practices to result in lasting injury. ■

A little bundle of joy

This personal laser printer is a welcome addition to the family of Windows users

Into the world of personal laser printers, a new baby is born. The NEC Silentwriter SuperScript 610 (couldn't its parents find a shorter name?) measured 370mm by 120mm by 358mm on delivery and tipped the scales at a healthy 8kg — which means that you have to be healthy, too, to carry it around.

The SuperScript 610 is a 300dpi, 6 pages-per-minute (ppm) printer for Windows users. It has two printing modes: Windows GDI (Graphical Device Interface) mode and PCL emulation mode. But, unlike other Windows printers, this one only works while Windows is running. Any DOS applications that you run must be launched from Windows, and need to be configured to print to a PCL printer. If you close Windows, you effectively lose your printer. I found this surprising after reviewing the Lexmark WinWriter 600 (see page 152 in the July issue) which automatically switches to its PCL mode when Windows is closed.

The printer is totally controlled by the PC, so it has a faster response and better status information. The printer only comes with 256K of memory, but this doesn't seem to be a limitation because 1.5Mb of your PC's hard drive is used as virtual memory. Printer performance can be improved by adding memory to your PC, or upgrading to a faster processor. On the down side, because the printer is using the resources of the



Sit back with a cuppa and let the Silentwriter SuperScript 610 handle your low-volume laser printing through Windows

PC I found that, even on my 486DX2-66 with 8Mb of RAM, I experienced delays in cursor movements or keyboard activity when the data for each page was passed to the printer.

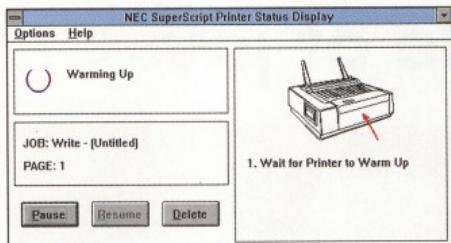
Being a bi-directional printer, most of the normal printer settings and alerts which appeared on the front of older laser printers are now displayed in a Windows dialogue box. There are still three status lights on the printer to indicate "printer ready", "paper jam" or "attention required" (used, for example, if the printer has run out of paper). I found it annoying that there is no form-feed button. Form feed can be useful in some DOS programs to eject the last page of, say, a database report. To perform this function you need to click on the minimised PCL printer icon, and select "Form Feed".

Feeding junior

The paper-feeding mechanism does not use the more conventional paper tray. Instead, just like the old dot-matrix printer days, the paper is placed almost upright in a paper hopper at the rear of the printer. After leaving some paper there overnight, I found that, by morning, the pages were starting to curl over the back of the plastic arms which supported them. The hopper has a 50-page capacity, but there is an optional 200-page hopper. Printed pages either pass out through the front of the printer (and onto your desk or the floor), or can pass around to the upper cover which doubles as an output tray.

The toner cartridge that comes with the printer only has a 2,000-page capacity, but replacement cartridges will print 4,000 pages, which ▶

MOUSEMAN CORDLESS



The printer does plenty of talking to your PC so you always know what's going on

clearly places this printer in the "for personal use" category.

Time to go to sleep

For environmentally-aware buyers, the printer comes equipped with a power saver: after a user-defined period of idle time, the printer reduces its power consumption to 20 watts. As with all power saving devices of this kind, there is a warm-up period before the next print job starts: for the NEC, it was 50 seconds.

NEC has implemented a graphics smoothing technology called SET

(Sharp Edge Technology) which detects and smooths the jagged edges of raster images to be printed. This is done by dividing one full dot into several sub-dots to be set in the appropriate position.

When testing the printer's output modes, I found one small problem with the PCL emulation when printing from Windows applications. When I de-selected "Use Print Manager" in the Windows Control Panel, I got the error message "Power Off or Cable Problem". Changing to the GDI driver or re-

selecting Print Manager did not get over this problem. The only solution was to close Windows completely, restart it, and then make the change either to select the GDI driver or re-select Print Manager.

With a street price around \$1,000, there is no argument that this printer should be seriously considered by stand-alone corporate users and SOHO users looking for a cheap start in the laser printer market.

- David Sokol

NEC Silentwriter SuperScript 610

A versatile performer, ideal for Windows users

Pros: Cheap, easy to use, fast and good quality output

Cons: Heavy for its size, no paper tray, no Form Feed button, minor problem with PCL driver under Windows

Price: \$1,197

NEC Information Systems Australia
Phone: (02) 930 2000

A mouse without a tail

Computers have come a long way in the past 10 years — even in the home, we now have access to PCs with faster and more powerful processors, and high-resolution colour displays. But along with advances in technology, some things have remained exactly the same.

Every desktop PC has a multitude of cords and cables hanging from it. The spaghetti jungle still exists: two power cords for the computer box and monitor, one keyboard cable and a mouse cable are the minimum. Add extra cables for a printer, network, modem, and sound card speakers and count them — eight cords dangling in an ugly mess behind your desk.

Some of these cables snake across the top of the desk, encroaching on valuable space. You put up with them because you have to — they belong to the keyboard and the mouse. But

they are always getting buried in sheets of paper, and have a nasty habit of tripping up your coffee cup.

Logitech has a solution that rids the desktop of one cable — the one attached to the mouse. Although the mouse has no tail it still works, because it sends signals via radio waves to a small receiver box that is in turn linked to the PC via a cable. Yes, you still need to use a cable, but the user has more options regarding its placement. I taped the receiver box out of the way under the desk.

The MouseMan Cordless is supplied with software on an installation disk, and setting it up is a breeze. The software allows users to assign Windows shortcuts, alter the button assignments and change the size of the pointer on screen.

The mouse itself has three buttons and uses a small 3-volt lithium battery. It fits neatly into the user's

hand; however, I'm right-handed so I can't speak for left-handed users. I've been using the MouseMan Cordless for several weeks. It works well provided the mouse is within a metre of the receiver, which also must be placed away from the monitor to avoid interference.

The mouse uses a small diameter ball which does not seem to work well on slippery laminated surfaces. Using a mouse mat with a slight texture solved this problem.

- Robert Thirlwell

MouseMan Cordless

Battery-powered mouse with radio receiver

Price: \$149

Logitech
Phone: (02) 959 2345

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It helps to have a SideKick

By most standards, the original SideKick (the DOS version) was a smashing success. It was innovative, useful, fun to use, and Borland International sold millions of copies. Unfortunately, SideKick did not stay high on Borland's priority list, and as a Windows personal information manager (PIM) it arrives very late.

Although its desktop metaphor is a touch corny, I like SideKick better than the PIM I'm currently using — Lotus Development's Organizer. The main reason I prefer Borland's product is its flexible databases and useful calendar view.

When you look at your daily calendar, for example, you get three separate lists: your appointments for the day, a to-do list and a phone call tracking list. Organizer only shows a standard notebook-style calendar. SideKick also has a View In View window that lets you list other data, without exiting from the calendar.

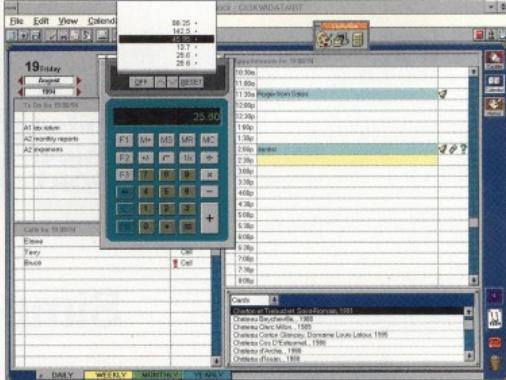
True to the original

SideKick for Windows retains most of the features that made the original so popular: a pop-up calendar; a notepad for jotting down stray facts and ideas; and flexible reports for printing your appointments, to-do lists and addresses.

SideKick adds a few new features that play on Windows. If you tend to live in your PIM, it has a floating customisable LaunchBar that lets you start up other Windows applications. A Quick Menu utility places a small icon in the title bar of open windows. If you are working in your word processor, for example, and you want to look up your next appointment, clicking on the Quick Menu icon gives you a list of SideKick views.

SideKick's calendar has some powerful features, giving users the ability to manage contacts and set up their own predefined activities. For example, you can click on a name from the card list and select the

SideKick's Calendar view with the calculator running. Note the Launch Bar which allows me to start other Windows applications. The View In View window at bottom right displays the card file



predefined Call {Last_Name} at {Phone_Number} option. SideKick then automatically pulls the name and phone number from the address database and creates a complete message, such as "Call John Smith at 555 1234".

Although these features are nice, some basic functions are not especially easy to use; they often require either wading through too many menus or steps that are not obvious. For instance, SideKick does not let you change a meeting simply by dragging it to the new time and date. Instead, you must switch to the daily view, highlight the appointment, right click to bring up the Field Edit menu, select Reschedule Activity, and, finally, set the new time and date.

SideKick's card file is nicely organised. You get an indexed listing of each card down the left side and a detailed card view on the right. The SideKick card file is far more flexible than the one in Lotus's PIM. Whereas Organizer's address fields are fixed, SideKicks' are customisable. In fact, you are not limited to a standard address book; you can easily create other custom databases for keeping track of miscellaneous information.

SideKick is fairly good at finding and filtering information. The Find button pops up a simple dialogue box where you can type what you are looking for. Figuring out how to filter the card file, however, took more time. A Query Cards menu option lets you filter by text, by an index range or by example. Query by example brings up a dialogue box that lets you select combinations of fields and Boolean operators. It's more powerful than Lotus Organizer, but it takes longer to set up.

If you like the desktop metaphor and are not put off by the cute icons, SideKick for Windows is a nicely-priced alternative to low-end PIMs like Lotus Organizer.

- Tracey Capen

Borland's SideKick for Windows

A competent and well-priced Windows PIM

Price: \$95; upgrade from DOS for \$50

Borland International (Australia)
Phone: (02) 911 1000

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Office-in-a-Box can turn a Windows-based PC and printer into a document imaging system, plain paper copier, plain paper facsimile, modem, document image filing cabinet and an OCR scanner.

It is a desktop document storage and retrieval system that includes E-Quip software, a 600 by 300 dpi full-page sheet-fed greyscale scanner, plus an Austel-approved Class 2 send/receive fax/data modem.

Faxes can be sent and received in background mode.



Office-in-a-Box is an integrated system that can transform your Windows-based PC

The scanner and associated software enables a user to scan, store, index, search, retrieve, print and fax documents, or OCR them to a text file.

The Office-in-a-Box also includes a find capability to help users manage and locate scanned or faxed-in image files, as well as a program for storing, printing or sending groups of images.

The document image storage and retrieval system within Office-in-a-Box enables single-sided, double sided and batch scanning capability, and Group III compression.

The system offers a fax directory facility that can keep up to 5,000

names in 10 directories. Screen prompts indicate if there is an incoming fax or a problem with an outgoing fax message.

Office-in-a-Box sells for \$1,699.

Data Capture Systems

Phone: (03) 889 0077

Your own modem

The MyPocketModem is a 14,400bit/sec pocket fax modem targeted at the small office/home office market. Designed and manufactured in Australia, it is Austel approved and offers a data throughput of up to 57,600bit/sec.

The full duplex, asynchronous pocket modem is battery or mains-powered and allows fax transmission to operate in background mode. It also has a broadcast fax capability and an auto detection feature which distinguishes between incoming faxes and data calls on-line. MyPocket-Modem sells for \$599 and a free introductory membership of CompuServe is offered with each unit. **Banksia Technology**

Phone: (02) 418 6033

Develop an idea

Inspiration for Windows is a visual idea development tool for planning and developing ideas that integrates diagram and outline views. Its diagramming features allow planning and idea generation and the outline view adds additional organisation and writing capabilities.

Features of inspiration include Rapid Fire which lets users type related ideas into one symbol. It automatically creates linked multiple symbols and visually records information without interrupting the thinking process to draw new symbols or links.

It's Point & Type feature captures random thoughts. It allows users to

click anywhere and start typing. The program puts a symbol around the idea to hold it until the user is ready to work with it. Inspiration's diagram view contains an unlimited notes area connected to each symbol, draw tools, automatic arrange features and the ability to layer levels within a document. The thinking process can be continued at any time by flipping to the outline view. It is available at an introductory price of \$199 until December.

Conexus

Phone: (02) 975 2799

HP subnotebook

Hewlett-Packard has announced the HP OmniBook 530 subnotebook. Based on a 33MHz 486SX processor, it offers a 130Mb hard drive, 4Mb RAM, and VGA-out capabilities that allow users to connect a full-screen display.

Features include instant on — when the machine is turned on the programs and files in use when the machine was shut down are restored immediately, even if the files were not saved; a full-size 85-key keyboard; a pop-up mouse; and a battery life of up to four hours.

The HP OmniBook 530 PC comes preloaded with MS-DOS 6.2, Windows 3.11, HP's appointment and phonebook software, and Traveling Software's LapLink Remote.

The HP OmniBook 530 sells for \$3,140. An external floppy disk drive is available for \$348.

Hewlett-Packard

Phone: 131347



The HP OmniBook 530 subnotebook weighs just under 1.4kg

Find that manual

Australian company HyperWrite has developed a software package to help you keep track of documents and software manuals within an organisation. Called ManTrak, it is a document management system that stores the location of the manuals that are in circulation, allowing copies to be located, updated and accounted for. It operates in Windows and includes features such as a reporting facility with Wysiwyg print preview and customisable field names. ManTrak also ships with an on-line help system and tutorial.

It keeps track of individual copy information such as whether the copy is in stock or on issue, the name and location of the recipient, the date it was issued and the date the copy entered stock. If an amendment to a manual is issued, an update of all the holders of previous edition copies in the system can be recorded in one step through a Bulk Amendment facility.

ManTrak sells for \$750.

HyperWrite

Phone: (03) 820 0383



Keep track of documents and manuals around the office with the ManTrak document management system

Walk through the National Gallery

The Microsoft Art Gallery is the latest addition to the Microsoft home brand. It is an interactive guide that walks users through the National Gallery in London. Based on the National Gallery's in-house computer information system, the visual encyclopedia is a collection of over 2,000 paintings that are permanently housed at the National Gallery. It includes works by Leonardo da Vinci, Michelangelo, Raphael, Titan, Poussin, Rembrandt, Seurat and Van Gogh.

The paintings are represented as 256 colour reproductions, digitised from the gallery's photographic records.

There is information about the paintings, the artists, and times and places in which the artists lived. It incorporates over 5,000 pages of information including over 700 artist biographies, and 500 glossary term explanations.

It lets users enter the system through four different headings: artists' lives, picture types, historical atlas or general reference.

The Microsoft Art Gallery also

includes thematic guided tours which introduce historical art issues and important works in the collection.

Microsoft Art Gallery sells for \$115.

Microsoft Australia

Phone: (02) 870 2200

Export guide

Evergreen Software Partners has released a booklet aimed at software developers who want to market their products overseas. Called, "Selling Computer Software Internationally", it is a 36-page booklet that outlines export marketing guidelines and offers tips on various aspects of export marketing.

Areas covered include Applying Good Business Practice, Research, Planning, Making Plans Stick and Export Marketing Options.

Evergreen Software Partners

Phone: (02) 418 4191

ABC with more power

ABC ToolKit is flow charting software that consists of two modules, the ProcessAnalyzer and the DataAnalyzer. It also offers an

easier interface and more detailed features, a spell checker and new print options, Ishikawa (cause-and-effect) diagrams have been added, plus statistical charting and user definable data fields. There are now also templates for process, deployment and cause-and-effect charts.

ABC ToolKit is available for \$1,395, Upgrades are \$595.

Merisel

Phone: (02) 882 8888

Help for aching wrists

If you feel cramps in your wrists after typing for a couple of hours the MouseMitts may be a simple and cheap remedy for your pain.

Designed to help prevent Repetitive Stress Injury (RSI) and as a therapy for people with Carpal Tunnel Syndrome (CTS), two MouseMitt products are available: the Computer Glove and the Keyboarder.

Both are lycra fingerless gloves that have padding at the wrist to provide a cushion between your wrist and the surface of your desk.

The Computer Glove is designed for CAD/CAM, graphic design, illustration or mouse-intensive applications.

The Keyboarder is designed for people who are at a keyboard typing all day. The gloves support your wrists and helps relieve the pressure placed on them in normal typing.

According to the manufacturer they "provide wrist relief and reduction in RSI for mouse users and keyboard operators".

They are available in three sizes



The MouseMitt gloves could be a cheap and simple solution for typists suffering from wrist aches and pains

and a variety of colours. The Keyboarder MouseMitts are sold in pairs and are available for \$29.95. The Computer Glove sells for \$14.95. **MouseMitt Australia**
Phone: (02) 550 3484

Colour inkjet

The microMarc Colour inkjet printer has been released by Texas Instruments . It measures 385 by 466 by 175mm and has two switchable printheads: colour and monochrome, allowing the printer to print both colour and black.



The microMarc colour features two switchable printheads allowing the user to print both colour and monochrome

The microMarc features PCL level 3 compatibility and five built-in font families, has a print speed of 400 cps and a print resolution of up to 600 by 300 dpi.

It prints on letter, legal, A4-sized paper as well as envelopes and comes as standard with an automatic sheet feeder that handles up to 120 sheets. The microMarc prints on plain paper, overhead transparencies, labels and coated or glossy paper. It weighs 5kg and sells for \$859 (ex tax).

Texas Instruments Australia
Phone: (02) 910 3100 ■

Accounting software that grows

Envoy is an Australian developed, shrink-wrap business accounting package. Aimed at small to medium-sized businesses, it features seven major modules: Payroll — for up to 10 employees; Accounts Receivable; Invoicing; Accounts Payable; Stock Control; General Ledger and Purchase Orders.

The Payroll module produces payslips, calculates tax, superannuation, leave, and workcare/cover provisions. It also produces group certificates at the end of the year.

Accounts Receivable can produce customer statements, overdue letters, marketing letters, mailing labels, analyse sales performance, calculate salesperson commissions and report sales tax owing.

The Invoicing module offers automatic pricing and discount calculation, checks customer credit and issues customers with service or product invoices.

The Accounts Payable module tracks goods and services and keeps a record of purchases and balances owing; gives an instant analyse of future cash commitments; and analyses purchases from suppliers to help in negotiations.

The General Ledger module offers cash book facilities with cash receipts and cash payments, and produces financial reports including a profit/loss and balance sheet.

The Purchase Orders module reports outstanding orders by date so you can see late deliveries; updates stock orders automatically so you can see product waiting for delivery; and tracks deliveries.

Envoy is designed to grow with businesses and can be upgraded. Optional modules include Payroll for unlimited number of employees; Point of Sale for retailers; Import costing and tracking; Bank Reconciliation; Report Generator; Automatic Billing; Job costing for trades and service businesses; and Bill of Materials.

Envoy also includes discounted training courses for purchasers; 24-hour back-up with four weeks of free telephone support; and a free sample stationery pack.

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By Andrew Kent

The race for survival

and productivity is, then competition will increase. Competition in the nineties will be fierce, and information technology will play a major part in business success. But information technology is not just Management Information Systems. Management Information Systems should rapidly become a tiny part of the portfolio of IT; most of the money and effort should be spent on making the organisation run better, be swifter, respond better to change, and service customers better.

IT is not just a means of automating your accounts: used intelligently IT can automate your stock control and banking through EDI/EFT and barcoding. It can reduce your business cycle. It can help you manage your customers, track correspondence, sales, complaints, comments, and provide you with a competitive edge. Use of modems can eliminate travel and reduce the significance of your geographic location. IT offers many opportunities for a new approach to business.

Small business can outsource their administration to their accountant so that they can concentrate on managing business and customers more effectively. This will provide them with more time to respond to changing customer needs, and to proactively seek new business opportunities. Conversely public practice accountants can use IT to increase their range of services to include the provision of a complete business administration service at a cost-effective price.

As governments and legislative bodies react to the excesses of the eighties by creating a straight jacket woven in red tape and rigidly changing regulations, it is becoming almost impossible for small and medium businesses to review the relevant documents, let alone com-

ply with them. Outsourcing the business administration load via modem etc, will not only increase small business productivity, it will also reduce the stress of small business management.

Fine-tuning old ways may be a more attractive option for you, but let me remind you that sailing ships reached their technical zenith during the dawn of the steam ship era; however, despite their impressive achievements they did not survive. The nineties are the dawn of a new era, and a new approach is required.

Working smarter

Business process re-engineering or BPR is the way many large organisations are tackling the competitive pressure of the nineties; in smaller businesses it is commonly referred to as working smarter not harder. Indeed, the large administrative overhead aside, small business is much more capable of being swift and flexible than the unwieldy giants. Australia has one of the best and most egalitarian telecommunications systems in the world; this, coupled with the abundance of business technology, makes for very fertile ground on which to sow the seeds of change.

Administration and legal compliance are necessary overheads in business, but too often they cloud the driving force in business success — profitable customer satisfaction. That comes from minimising the time between the customer contacting you and you satisfying their requirement in a way and at a price they are happy with. IT has a pivotal role to play in this process. Focus on this and be competitive in the race for survival.

• *Andrew Kent is manager, IT at the Australian Society of CPAs.*

Welcome to the nineties! Four years into the decade it's like saying "happy new year" in May. But if the recession was the hangover we had to have after the excesses of the eighties then perhaps it is appropriate, as many businesses have only just recovered enough to start reviewing their environment. Unfortunately for those with aches and pains still in their bones the worst may be yet to come. By being in business in the nineties you have just entered in a race for survival.

As William Raduchel from Sun Microsystems said: "Companies need to realise how radically different the nineties are becoming. The need to drive change is very real. The globally competitive race is a very tough race, and that's why everyone is re-engineering themselves in Japan, in Europe and the United States. The race is going to go to the swift and to the flexible."

This applies equally to small business and public practice as it does to multinational organisations. If the market size is not increasing

BEYOND THE COMFORT ZONE:

Two accounting partners have set up their own Information Technology consulting business to offer clients a one-stop shop

It's one thing to listen to ivory tower theories about why accountants should move beyond their comfort zones into the "leading edge" field of Information Technology consulting. It's quite another to see just how much hot water your own clients can get into when they attempt to computerise their business without your expert advice.

Take Frank Garth and Martin Bull, of small Melbourne practice Bull Garth Partners. The two partners decided to take the plunge into IT consulting after being astounded by the amount of recovery work coming their way from clients trying unsuccessfully to pull themselves into the computer age.



Frank Garth (left) and Martin Bull. Advising clients about ways to use technology

making the move to IT consulting

"A lot of clients buy software that is unsuitable for their own application, without seeking advice first," Garth said. "It says something for the misguided perception that most people have of accountants — that we're just bean counters.

"The reality is, who better than an accountant with IT knowledge to advise you on how to set up your business systems and mirror that in your computer systems?"

Now the accountants are reaping the benefits of their move to establish Online Computer Systems as a separate but related business.

Today more than 90 per cent of revenue is coming from outside the partnership's client base, and the partners confidently expect the business to grow even further over the next two years.

These days Bull looks after the accounting and management services side of the accounting practice with the help of several staff, and Garth has two full-time staff assisting him in the IT role. The partners still operate the practice together and share a joint role in marketing and managing both businesses.

Bailing out clients

Inspiration for the new service came from the numerous clients who had bought systems which either simply didn't fit their business, or which would make it impossible for their business to grow as it should in the future.

"So many of our existing clients had computerised and bought accounting or business software without ever thinking of consulting their accountants first," Garth said.

"Another major problem is that clients don't use their software to the fullest capacity, and one of the major roles we play on-site is to re-train

them and help them re-look at their internal system.

"If you don't use your package to its fullest capacity, you don't really get to understand how your business is running, because it doesn't highlight the major problems," he said. "A client might be experiencing major financial or operational difficulties, or just not be growing as efficiently as they should be, and just not know why."

Garth and his staff now spend much of their time showing clients how to extract better reports from their existing software for improved business operations. Currently about 70 per cent of the company's consulting time is spent advising clients on ways to improve the day-to-day operation and management of their business.

"It is about showing them how having the proper computer facilities helps them manage their business better," Garth said.

The other 30 per cent involves selling and supporting accounting software packages.

In-depth knowledge

Before establishing Online Computer Systems the two partners, both with a good working knowledge of several accounting packages, did extensive research on the numerous accounting software solutions available.

IT consulting is becoming a highly competitive business. Garth said it was very difficult to become an expert at more than one package when you had to install, train and consult.

"We made the decision we would specialise in one package and become very proficient in that package because training our staff was a major issue. All staff have to be at the ▶

Another major problem is that clients don't use their software to the fullest capacity

level where they can answer any query on the run," Garth said.

Following their research, they decided Online Computer Systems' preferred recommended software would be ACCPAC Plus from Computer Associates.

"We found ACCPAC Plus was one package that has quite a lot of other applications that can run alongside and around the financial accounting package, such as computerised manufacturing systems, and time billing and receivables."

"This meant we could set up a system for the internal audit team of a public company so they could manage their times as efficiently as possible," Garth said.

"Time billing and receivables is one of the areas we have specialised in because it is such a complex area, and it is required by quite a number of different industries."

That decision to specialise has paid off, bringing the practice a host of high-quality clients who might not otherwise have used their services.

ting consulting dollars. A lot of others in our industry with whom we compete just aren't interested in the consulting side, they only sell software.

"So we are picking up a lot of heavy consulting clients, and a good consulting client is the equivalent of an extremely good accounting client," he said.

The company has increased its turnover by about 30 per cent in the past 18 months, and is confident turnover will increase at an even higher rate over the next 12 months to two years.

As a professional reseller, Online Computer Systems offers advice, provides demonstrations, recommends solutions, and supplies and installs software, training and support.

"It's much better for clients to have a one-stop shop, especially when it is accountants who are supplying everything rather than computer vendors," Garth said.

The company also advises clients

Bull said. "In a demo, you can address real business issues as an accountant. A lot of trust is built up in these stages, and it's that kind of contact that keeps the business relationship developing and growing."

Expertise

Both Garth and Bull agree accountants need a good working knowledge of the basics of information technology to succeed in IT consulting.

However, they say it is not necessary for accountants to be highly technical.

"You must have a sound knowledge of computer systems, a practical approach to problem solving and a thorough understanding of how business operates on a day-to-day business level," Bull said.

"You need an understanding of DOS and a basic understanding of matters like LANs, but you don't have to be a programmer or 'techie' as such.

"It is really all about making good business decisions for your clients."

Once accountants have mastered those skills, the benefits are many. For one thing, when clients have better computer-based systems in place, their accountants receive much better quality information from them.

By getting information from clients that was captured in a controlled environment, accountants can move away from basic processing hack work into more rewarding areas. It also encourages clients to seek more advice on improved business practice.

"And the work is great," Garth said. "It's interesting and there's no better way to pick up further business than when you are out of your office and on-site with your client. Just being there forces you to analyse their system and assess the way they do business."

"At the end of the day, it is all parties who benefit — you pick up more work and the client gains enormously from improvements made to their business practices."

- Sue Bushell

From there, clients will make their own decision

Online Computer Services has worked on 40 new sites over the past 12 months, for clients ranging from sporting clubs to manufacturing, services, food, maintenance and building industries.

While they generally target companies with upwards of 10 employees, they have been approached by large public companies with thousands of employees.

"The new business has won us some excellent profile clients. The public companies are a totally new business to our practice," Garth said.

The new business is also, slowly but surely, improving the partners' overall bottom line. Improvements don't happen overnight — Garth says there is a lead time where staff need to build up their knowledge and skill — but there are powerful medium to long-term benefits.

"By putting sites in we are get-

ting their existing accounting packages where appropriate.

"We are quite often bought in to sort out their current system, whatever package that might be," Garth said.

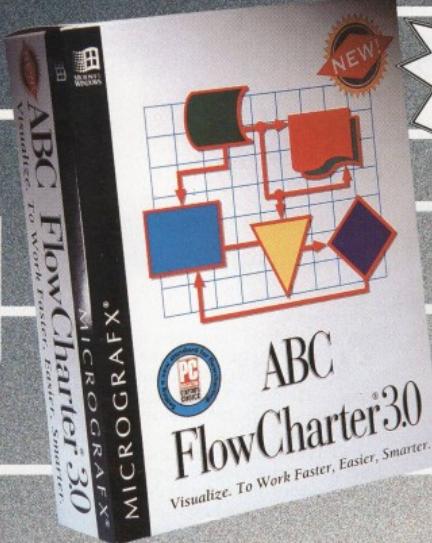
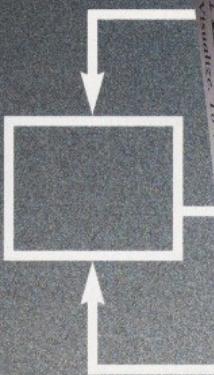
"We do an initial study for the client to determine all their requirements throughout the organisation from a financial and management accounting-type application, then we put forward a report on areas that need to be addressed.

"From there, clients will make their own decision."

Both partners believe accountants are ideally qualified to assess business needs and offer advice on taking a business beyond computerised book-keeping into information management.

"The benefit of offering a complete service is that you build up a good relationship with your client,"

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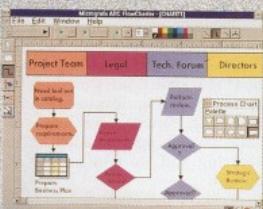
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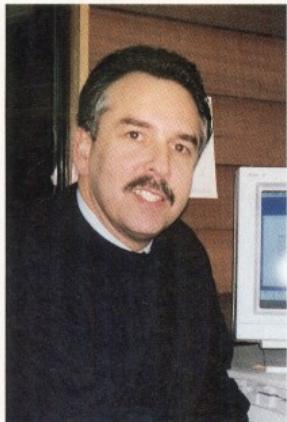
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Fast-food supplier delivers the goods



Michael Iori, general manager of Clevermont, working very closely with customers

How management accounting can create a competitive advantage — through exceptional customer service

An ice cream shop runs out of cones. A fast-food outlet runs out of milkshake containers. Imagine the disruption! The staff of Clevermont Pty's make sure that doesn't happen.

Clevermont is neither a manufacturer nor a franchise. The company's success relates directly to its development in a growing industry sector.

The rise of franchise businesses in Australia has created a new service opportunity. Large franchise organisations such as McDonald's are vertically integrated. This means that the head office owns and controls many of the companies that supply packaging and other materials to the franchise outlet. However, many smaller franchise companies cannot justify this level of diversification.

These franchise companies prefer to stick to their core business. Management time is most profitably spent marketing the franchise concept and offering operational advice to existing franchises. In line with a trend towards specialisation, manufacturing and warehousing is outsourced.

This trend has created an opportunity for companies like Clevermont to provide a service to both the franchise head office and the franchisees. Clevermont undertakes to provide an almost instant warehousing service to hundreds of fast-food franchises in New South Wales.

The franchise head office negotiates a price with a manufacturer. Clevermont purchases these manufactured goods and distributes thousands of packaging items — paper

cups, ice cream cones, hamburger packs — to the franchisees at a contracted margin.

Franchisees need only maintain minimum stockholdings of packaging materials, enhancing profitability. The outsourcing relationship eliminates the expense of non-productive storage space in often high-rent retail centres, and conserves cashflow. In effect, the franchisee only pays for the materials which have already been paid for by the fast-food consumer.

So what does a computerised accounting system have to do with this operation?

The operative word in this industry is *fast*. Turnover in a fast-food franchise is dependent on a large number of low dollar value purchases. They sell fast, and they expect their suppliers to deliver goods fast. For Clevermont this means that orders must be processed instantly and delivered the next day. As a supplier, stock control and order processing must be impeccable. The consequences of delays or lack of stock are disastrous for the franchisee.

To ensure that their customer service meets these demanding requirements, Clevermont has installed a 12-station Novell network with a mix of 386 and 486 PC workstations. The software which drives the operation is Sybiz Elite Two Accounting linked to a custom-written telesales system.

This may seem like a heavy investment in computer technology for a service company with a \$7 million annual turnover. Yet according to managers Michael and Kim Iori the computer system is essential. Their

competitive advantage in a highly competitive industry is the provision of exceptional customer service in a time-critical environment.

Clevmont's hardware choice is an example of its commitment to excellence in customer service. The management software will run perfectly well on less powerful (read less expensive) computers and provide exactly the same information. But much of this information is needed instantly to respond to a customer's telephone enquiry. More powerful hardware means that the crucial information may be accessed much faster. The busy franchisee is not left on hold waiting for a customer service clerk to confirm a price while agitated customers are queuing up at the counter.

Instant information

Clevmont's strength is customer service and that means customer service is a priority of every staff member. With a networked PC on virtually every desk, all staff have access to the information that is necessary for answering any customer enquiries. Information on orders, details of invoices, availability and delivery information is at everyone's fingertips. The system even includes an on-line date-activated notepad on every account. There's no need for yellow Post-it notes to litter the computer terminal and, obviously, a handwritten note is not available to everybody. Kim Iori describes the notepad as a blessing.

To many managers and accountants the thought of everyone having access to the accounting system would be a nightmare. Yet the system's flexible password control means that access to sensitive information such as margins and financial details may be limited. In fact the system allows for up to 64 different access combinations covering enquiries and transactions.

Access raises another issue — ease of use. Many managers would not be confident that all their staff are competent to use an accounting system effectively. Kim Iori puts ease of use into a very relevant business perspective. According to Kim, turnover

of data processing staff is a fact of life, and it is not always possible to hire staff with experience in the company's accounting system. When a new creditor's clerk was hired recently, Kim expected the learning process to take at least a week and involve a lot of supervision. She was pleasantly surprised to discover that the operator was competent on the system within a morning.

Every prompt on a Sybiz screen guides the data entry process. Function keys and pop-up menus highlight the only available options at any point, so there is very little chance of doing the wrong thing. However, when operators are familiar with the system, fast hot-keys allow them to bypass all the menus and access functions in a single keystroke.

A \$7 million turnover relates to a very large number of ice-cream cones or paper cups, and consequently an extremely high volume of invoices and other transactions. Fast-food retailing is a seasonal business. In holiday periods data operators may input up to 300 multi-line invoices a day with no room for error. According to Kim Iori, Clevmont's most senior data entry operator enters data so quickly you can't see her hands move.

Sales analysis as a competitive tool

When asked what he found to be the major benefits of the computer system, Michael Iori conveyed a very typical experience. During the selection process, management had certain functional criteria they expected of an ▶

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accounting system. However, it was only after using the system that they began to fully understand its potential as a competitive tool.

One of the most useful management tools is the quick enquiry. According to Michael, no matter what he is doing he is able to view trends at a glance by flicking to the on-line enquiry function. In addition to detailed information, graphs show a 12-month history of any purchases, sales, product turnover and expenses. As business is full of interruptions, after the interruption, he can simply return to whatever he was up to, even if he was in the middle of creating a 30-line Purchase order.

Like most small business managers, we are extraordinarily busy

As Michael tells it, "We work very closely with our customers — almost like part of the family. We knew that through our sales analysis we were accumulating a great deal of information on each customer's purchasing patterns and realised that this might be useful to them, as well as ourselves. As a service to franchise management we now supply information that enables the franchise head office to negotiate better prices from the manufacturers and also information that gives the head office a double-check on every franchisee's turnover. This is an important issue when a considerable proportion of a franchise company's revenue is related to royalty payments.

"These reports are not standard but were created especially for us using Sybiz's inbuilt report writer. The value of these reports would not have become clear without the help from Sybiz's support staff. Over the last three years Sybiz personnel have become intimately acquainted with the everyday running of the business. Associated with this has been a growing understanding of the customer service goals Clevermont continually sets and aims to achieve. Sybiz staff have been able to suggest exactly how a custom-designed report may

solve a problem, or enable the company to offer additional service, and then implement them.

"Like most small business managers, we are extraordinarily busy, and don't have the time to discover these functions by ourselves."

Michael is now working towards providing this information on computer disk so that it may be input directly into a franchise head office computer system

Delaying tactics avoided

As anyone in business knows, every aspect of an operation impacts on the business relationship — from reception to accounts. Kim states, "A prob-

lem became evident in the debtors' department. We were very happy with the information on debtors' aged trial balances which gave us all the information we needed to chase up payment. We even had the '... never received that invoice' delaying tactic worked out. Sybiz allowed us to print a copy of any outstanding invoice and fax it directly to the troublesome debtor, even if it was months old.

But we soon discovered that the amounts that our customers were paying were not matching up with invoices. It turned out that we had set the statements to print only the outstanding monthly balances which made reconciliation difficult. Thanks to the flexibility of Sybiz, we simply made a simple set-up change and now all the invoice details are printed on each statement. This results in a lot less frustration in our debtors' department and naturally in the Accounts Payable section."

Linking other applications

Although the Sybiz Elite Accounting system handles many of the business functions effectively, it does not provide all the information needs of the operation. Michael and Kim realised that the telesales division required a

different system to manage contacts but that this would use much of the same information as Sybiz. The telesales system was custom written for Clevermont by a Value Added Reseller. In addition to its telesales role, it directly accesses relevant information from the Sybiz accounting system. This means that sales people always have up-to-date information on stock availability, customer purchase history, and pricing at their fingertips.

Throughout this article you may have noticed that there is virtually no reference to financial accounting — profit and loss, general ledger, debits and credits. This is for one simple reason: many small businesses find financial accounting far less relevant to their everyday operation than management information. The small business perspective contrasts totally with a traditional accountant's focus. It is in the general ledger that summarised accounting information is accumulated: trial balances, income statements and compliance reports. However, the general ledger is not particularly useful in providing the information needed for performing day-to-day tasks.

Like many other small businesses, Clevermont has implemented all the other management accounting ledgers far in advance of the general ledger. Management accounting functions are order processing and invoicing, debtors and creditors control, stock management — all the functions which have a direct impact on the service provided to customers.

Fortunately, for companies like Clevermont that very modestly describes itself as "computer illiterate", the management accounting functions are the easiest to understand.

These management accounting functions help a business make money. The financial accounting facilities in the general ledger help you count it — but you have to make it first! Clevermont is certainly maximising the investment it has made in its computer system, providing a win-win situation all round.

— Katrina Shearer

Public Practice 2000 competition

The use of technology by an organisation should reflect the nature of the organisation. This is equally true for public practices. The Australian Society of CPA's Information Technology Centre of Excellence look at the use of it in public practice.

Research conducted by the ASCPA Information Technology (IT) Centre Of Excellence (COE) revealed that information technology uptake by public practitioners was reasonably high with most practices reporting a computer workstation/terminal to staff ration of almost 1:1. The survey results also suggest that most practices have been reasonably successful in addressing the compliance (preparation of Tax and other legal related documents) orientated requirements of the practice.

Most practices believe that their systems and procedures are efficient. However the cost of IT and justifying these costs is a significant concern for a majority of practices. Many practices have professional or support staff who possess the necessary IT skills to equip them to identify and manage the risks of IT.

Anecdotal evidence suggests that it is possible for an accounting practice to utilise IT to increase the volume of tax compliance work by 900% in the last eight years without increasing staff. However there has only been a marginal decline in the number of accountants in public practice during the same period, whilst the volume of tax compliance work has experienced a very minor increase. This could be explained by the following:

- Public accountants are increasing the volume of non-compliance work they perform;
- Public accountants are not obtaining the productivity increases outlined above;

In fact it is quite probable that both these things have occurred. It stands to reason that in a relatively static market (tax compliance work) increased efficiency will lead to reduced prices and ultimately result in fewer suppliers. This would indicate that there will either be fewer public practices or public practices will offer a greater range of services. To date most practices have chosen to expand their range of services. Indeed the survey results suggest that there appears to be significant opportunity for public practices to consider the use of IT for the improvement of client services and the provisions of value added services.

When asked how the type of services they would provide to their clients in the future would be influenced by IT, the practitioners drew on the following themes:

- We will need to keep up with IT to remain competitive;
- We may increase the level of IT advice we provide;
- We will use IT to improve the level of service we provide;

Public practitioners have readily adopted technology, particularly in relation to compliance work. However as they move into other areas of service, many of which are just as complex, they are less confident in the utilisation of IT. Understanding that public practice is increasingly competitive, and that the next century is only six years away; how will a public practice utilise IT in the year 2000?

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The ASCPA IT COE is seeking articles of 2000 words or less which describe the business and IT components of a public practice in the year 2000 and the events and decisions behind this configuration.

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The winner will receive an Optima OCT P5-60 Pentium PC, plus Microsoft Office pack from Optima Computer Technology and a years subscription to *PC World*. The winning entry will be published in *PC World*.

The ASCPA IT COE will own the first print rights to all articles entered in the competition.

Articles should be forwarded to:

Public Practices 2000 Competition, ASCPA, GPO Box 1161, Brisbane, Qld 4001.

The competition entries must be received by last mail October 3, 1994.

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The impact of EDI on small to medium businesses

Even the smallest company can win new business by waving the EDI flag at a larger organisation that is already doing EDI

In recent years much has been written and spoken on the benefits that EDI (Electronic Data Interchange), electronic trading and electronic commerce can bring to an organisation. These benefits have been demonstrated using examples from larger companies. Rarely has there been an analysis of the benefits to smaller organisations.

Ninety-six per cent of businesses in Australia can be described as small businesses. There are more than 750,000 of them, with the definition as follows:

- Less than 20 employees
- In a manufacturing environment, less than 100 employees
- Revenue of around \$1-2 million (or less)
- Owner-managed, private company.

An analysis of the trading partner profile of any large organisation or government department will generally show a similar distribution of small businesses. If a large company is contemplating efficiency gains which require the co-operation and assistance of its trading partners, it obviously must consider the effect on small business.

Usually an influential trading partner has identified EDI as a strategy for making their operation more efficient. This could be a supplier, a customer or a government department. Suppliers do not usually enforce EDI implementation with their customers. In the case of large suppliers, for example BHP Steel, Australia's largest company, they sometimes have enough market influence to encourage operational change in their customers.

More often a major customer or a government department will man-

date EDI as the preferred method of trading. It is then the role of the organisation being approached to react.

To date these initiatives have attracted other larger organisations and the number of users of these business trading methods has grown to about 5,500. In order for EDI to mature to the next generation and to reach critical mass in terms of number of trading partners involved, small business involvement is critical.

With relatively few large business concerns in Australia trading with thousands of small and medium size enterprises (SMEs), the challenge for the EDI community is to encourage and facilitate the involvement of these smaller businesses to take advantage of EDI.

The enablement of small businesses is a challenge for both big business and small business. Trading partner programs initiated by big business must have a small business focus in terms of benefits and implementation costs.

Small business, more than big business, can realise strategic benefits of EDI by getting involved now. For big business EDI has clearly become a business requirement. The strategic advantage for them is negligible, except for those industries just awakening to EDI. Small businesses clearly have the opportunity to market themselves as EDI-capable to larger trading partners. It has been demonstrated in EDI communities around the globe that even the smallest size company can win new business by waving the EDI flag at a larger organisation that is already doing EDI.

Small business concerns

The cost of implementation can often be a seemingly insurmountable barrier. Of concern to the small business

Being forced into EDI by large companies

Having trading requirements forced on to small business is a fact of life. Most government departments today require that business be "quality assured" if they are to deal with them. Retailers have for many years required that suppliers barcode their products. Automotive manufacturers have instituted "just in time" techniques which have changed the way that small businesses run their operations.

These are just a few of the new business techniques and methodologies that have been "forced" on to small businesses. Those companies that have turned those requirements to their advantage have been the survivors of the '80s and '90s.

EDI and electronic commerce are no different.

Varying methodologies and implementations by large trading partners

This can be a significant barrier to the ease of implementation of EDI in small business. There needs to be co-ordination of the work being done in EDI by all of these large trading entities. The EDI council of Australia (EDICA) is committed to ensuring that this co-ordination takes place.

Co-ordination, however, benefits the small business in the short term, not the large business. Thus large businesses have no immediate reason to co-ordinate. The only

way that it can happen effectively is for small companies to urge this co-ordination through EDICA.

The cost of EDI software

EDI software is coming down in price. Already some of the network providers have reduced the price of software. This is due to pressure from small business. Small business can have an effect because there are so many of them. Make yourselves heard through your industry association and through EDICA.

The ongoing cost of subscribing to an EDI service

This is an area where significant work is being carried out. Over the next 12 to 18 months we will see some revolutionary changes to the charge rates and mechanisms of these services.

Maintaining two ways of doing business: paper and electronic

This may be another fact of life. It is, however, quite a simple task if your software can handle it. Once again small business has a role here. Software providers have, for many years, said that there is no requirement for EDI capability in their accounting, inventory and business packages. It is up to small business to let them know.

Once again call your industry association, EDICA and your software supplier to make your needs known.

community is the cost of doing EDI. Hardware costs are standard and relatively minimal. However, EDI software and EDI network costs can be an issue and may need to be addressed by the wider community, not just SMEs.

More important than the cost of software is its functionality. So-called "turnkey" packages developed for a specific industry sector or sub-sector generally do not include an EDI component. Considering that EDI is being mandated in many industries, software just isn't keeping up with business needs.

Here are some of the concerns about electronic trading that bother small business:

- Being forced into EDI by large companies
- Varying methodologies and implementations by large trading partners

- The cost of EDI software
- The ongoing cost of subscribing to an EDI service
- Maintaining two ways of doing business: paper and electronic.

Some of these concerns are just part of the process of doing business in today's environment. Others can be helped by adherence to common goals for the benefit of all concerned.

If we look at each of the above concerns (see the box item on this page) we can see how the community is banding together to ease the burden on small business.

Taking the strategic step

EDI should be a strategic decision. We need to put less emphasis on dollars and look at EDI as part of the business infrastructure. Ask yourself,

"Can you do business without a phone?" A rhetorical question.

We all know that the phone is a business requirement and the phone bill is paid without questioning whether phone service is a necessity. Fax machines and PCs have already been incorporated into the business infrastructure, with little justification necessary. EDI will soon be accepted in the same way.

Small business needs to understand the imperative for EDI and learn how to take advantage of being proactive. Early entry into EDI is the only way to leverage the investment.

Use the resources available to you, your industry association, the ASCPA, EDICA and your software providers. Make yourself heard so that the combined weight of 750,000 small businesses can be felt.

- Michael Butler

How to computerise your inventory

A step-by-step guide to managing your stock by choosing the right software with the right features

Everyone has stories of problems getting stock computerised. However, most difficulties can be avoided by planning ahead and asking for help when you need it. And the process is worth it — a good system can transform stock management, and save a business thousands of dollars each year.

Firstly, though, you have to choose your software. What will be the best package for you will depend on your budget, the type and size of your business, and your individual needs.

Here is a starting point for questions you should consider when selecting your software:

- Does the system provide for multi-users? You might only envisage having one user on the system to start off with, but you need to allow for future growth if anticipated
- Is there an option of an add-on point-of-sale module? If you are in retailing/wholesaling this is particularly important
- Does it allow for assembly items? This is relevant for any type of manufacturing business making up one product using several individual items

- Does it have product groups as an option? This can provide invaluable management information

- Does it use an average cost system, or First In First Out system (FIFO) for calculating cost of stock? (Last In First Out (LIFO) which is used in some US Software does not comply with Australian Accounting Standard AAS2)

- Does it allow for reporting across different jobs/cost centres? You'll need this if you want to do profit-and-loss reports for individual departments or individual projects. Some leading accountancy packages such as Attaché 5 make accounting for different departments/jobs quite fiddly, requiring a different ledger account for each expense in each department

- What level of support is offered? Many major packages will offer telephone support only on their software and not on accounting questions — this is all very well, but with accountancy packages there is a large overlap and in reality to set your system up properly you will need help with both accountancy and software questions

- Is your existing hardware

What stock information should a good system have?

- Stock sales per month for last 12 months
- Individual details of each sale of a stock item eg date, customer invoice no., cost
- Month-to-date and year-to-date details (cost and sales)
- Itemised stock sales by salesperson
- Automatic printing of stock labels
- Re-ordering reports, allowing for lead times and purchase quantities

What features should I look for?

- Back-ordering (automatic or manual)
- Stocktake sheets with automatic variance adjustments
- Multiple pricing levels, allowing for different types of customers
- Ability to create product groups and to select linked general ledger accounts for each individual stock item
- Entering of stocktakes using a bar-code scanner

capable of running the software? Do you need to upgrade in order to be able to run it?

- What level of information and what facilities do you think you really need? In the box below are some typical reports and facilities that you would expect from a comprehensive inventory module of an accountancy package.

How to get started

Be systematic. Be patient.

STEP 1. Select a target accounting cut-off date, usually an end of month. This will be your start-up date. Do a stocktake at this date. If you are setting up an entire accounting package, and not just stock, you will also need to have your accountant prepare your Profit & Loss Report and Balance Sheet as at this cut-off date.

STEP 2. Draw up a stock listing which should include (where applicable) product description, cost, product group, suppliers' names, sales tax rate, selling unit quantity and selling price(s).

STEP 3. Design product codes for each item. Take time with this, especially if you have many different items: many packages won't let you change your product codes at a later date. For systems without product groups as an option (eg Attaché 4), incorporate product groups into your codes if you need this type of information. Write your codes on the stocktake list. Communicate your system of stock codes with others — make sure your system is logical and understandable.

STEP 4. Enter all your product information from Steps 2 and 3 into the system at your leisure, before the start-up date. (If you are installing an entire accountancy system, you will also be setting up supplier information, customer information, the chart of accounts, etc at this point.)

STEP 5. At the start-up date, enter the quantities on-hand for all items. Depending on the system you will do this via purchase orders, stock-take entry, or individual editing of each stock record. (If you are setting up an entire system, you will also be entering opening balances for

customers, suppliers and general ledger at this point.)

STEP 6. Print a listing of all stock items, and check it against your original list. Check that the total value of this listing is equal to your stock on-hand value in your balance sheet. Once you've got it right, print out a final hard copy and keep it as a record.

STEP 7. Assuming your creditors, debtors and general ledger modules are set up as and if required, you're ready to go!

Maintenance of your stock system

The biggest accounting question is, does the software integrate stock automatically with the general ledger and creditors? If it does not integrate automatically (eg Attaché 5, Equity, Pacioli), you'll need to be careful. The main principle is — *the total dollar value of your stock assets on hand should equal the balance of the stock account in the general ledger.*

To ensure this, regularly tally these two figures, and always match stock receipt reports against creditor invoices.

When there is a difference between the figure on the computer and real life for the quantity on hand (surely not!) — try first to establish the cause of this difference and journal the variation to the appropriate account.

For example, journal shrinkage to a shrinkage account, or samples to an advertising account. Small variations which have no obvious cause can simply be posted to a stock adjustments account.

What reports are necessary for accounting purposes? The absolute minimum for end-of-month should be a stock asset report, and a list of stock journals if applicable.

Many of the major systems clear out transaction information at the end of the month — for these systems you will need to print out more information as it will be your last chance! Of course, 12 sets of backup disks kept exclusively for each end-of-month are a must.

Good luck!

— Veechi Curtis

Some do's and don'ts

DO

- Consider the people side of things. What staff are affected by the change? How does it affect hours, staffing and responsibilities?
- Spend some time with a demo disk before selecting your software
- Allocate money and time for training. On-site training geared towards your individual needs and office systems is usually most cost and time effective
- Employ a temp for bulk data-entry if you have a lot of products and inventory information
- Talk to your accountant; usually they will need to prepare interim financial statements as at your start-up date for you
- Allocate responsibility to one person for ensuring stock on the computer is accurate and up-to-date.

DON'T

- Blindly rely on your accountant's recommended package; accountants often have their pet favourites (on which they receive commission). They may also have limited experience of different software
- Try and install your stock in stages as and when you need the items
- Blithely make up costs and other information saying 'I'll get back to it later'
- Change general ledger accounts which are linked to stock without really thinking about what you are doing
- Include labour as a cost of assembly for products if you expense all your wages cheques directly.

Point-of-sale dilemmas



By Reg King

When evaluating potential systems for retail stock control, watch out for shortcomings

If you are a small to medium sized retailer moving into computerisation for the first time, you probably have little understanding of what you can expect from a system.

From my experience talking to such retailers all over Australia, most buyers in this area are motivated by perceived benefits rather than reality. Pressures from their buying groups or colleagues have them convinced that computers will substantially increase their profitability! The majority are over forty years of age and have had little, if any exposure to computers. They represent "fair game" for overzealous representatives of the retail computer industry.

What is the cost?

Because of the lack of information these buyers concentrate largely on price when making their final decision. After all, if you are convinced that what you are about to do might be a mistake the least you can do is limit the cost of the error. The truth is that it is just as dangerous to spend too little on a system as it is to spend too much.

The answer lies in making an economic decision which involves weighing up the cost of the investment against the established benefits. These benefits will vary between

retailers, even those in the same industry. Don't listen to salespersons who promise returns based on the history of the industry. Use these as a guide by all means, but do your own evaluation. Involve your accountants and have them quantify your potential returns. You will then be able to budget your expenditure wisely. If your budget turns out to be more than you had expected then you will evaluate those slightly more expensive systems from a completely different perspective.

Stock control

The other dominant reason why retailers opt for computerisation is to control their stock. When it comes to tracking the receipt and sale of stock items, the average retail computer system has no peer. However, although this type of control represents a giant step forward for the first-time user, it must be remembered that it is only half the picture of true stock control. The other part is knowing what and how much to buy, and when to buy.

In this area most of the systems are about as effective as an ashtray on a motorbike!

The majority still rely on some form of minimum/maximum system where the job of forecasting future requirements is left largely to the

retailer. Some are just now beginning to wrestle with the idea of setting up forecasting systems. This will hopefully complete the picture and offer retailers great savings in time and prevent over-expenditure on potentially redundant stock lines.

Why it has taken the industry so long to respond in this area is anybody's guess. I suspect they've been simply automating the manual inefficiencies that we have worked with for years and have failed to exploit the power of the technology they represent. I once asked a supplier of a retail computer system why the stock control program was limited to an archaic basis of minimum/maximuns. Was he devoid of original thought? Why hadn't he, for instance, included a sophisticated algorithm for forecasting stock demand? He answered, "We don't want to take all the work off the retailer! He might resent it!" I have since wondered whether his mother knew he was on the loose.

When evaluating potential retail systems spend more than a reasonable time evaluating the method by which the system purportedly controls stock. Ask the supplier to provide you with the mathematical algorithm that decides such things as lead times, seasonal fluctuations and requirement forecasts.

Reports

Another important area for evaluation is the reporting structure.

Suppliers attempt to impress in this area by the quantity of their reports rather than the quality.

At a recent seminar I conducted, a hotelier came armed with thirty-two stock reports produced by his computer. It was agreed by all present, including the hotelier, that only two were worth producing, let alone reading.

Before evaluating any system decide the type of reports you will require to meet your objectives. Take these along to presentations and ask for a sample of the equivalent reports from the system being evaluated. It is easier to have any shortcomings corrected before you buy rather than afterwards.

It is a great pity, but a reality, that over the past 10 years many retail systems have been sold — but few have been purchased! These are just three of the more important issues that need to be considered before buying a computer system. There are many others, such as security, scanning, speed of operations, integrity of data collected and ease of use.

The most important requirement is planning. Take the time to evaluate your needs and establish a goal against which you can measure your future success. Computerisation can make all the difference to the future success and profitability of your business, but only if you go about it professionally.

Take care! ■

Why it has taken the industry so long to respond in this area is anybody's guess

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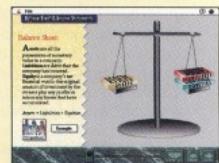
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Make it look like a game and the ankle-biters will lap it up

By Jan Wikström

Educational software used to be pretty earnest, dull stuff, but Windows has changed all of that. It's now easy to create pretty and yet functional graphics. Multimedia, of course, adds the cherry on top.

Having said that, I don't think many would regard Kap'n Karaoke from WordPerfect's Main Street series as anything but straight-out entertainment, however educational singing may be. The name, by the way, is misleading. This is not karaoke because no microphone is involved; the PC plays a synthesised tune selected from a list of 20 and the kids sing along without amplification.

As software, KK works fine. It has a good, clear user interface, in the style of a toy cassette player. There are controls to change pitch and speed as well as volume, and a row of additional buttons along the top lets the user insert miscellaneous rude noises into the music. None of the test kids had any trouble using it first-off without instructions.

I can't pretend to be a music

Thing along with the PeeThee

critic, even where children's songs are involved, but I find it difficult to understand the selection process here. Some of the songs are typical ditties for three-to-five-year-olds, some are actual pop/rock songs and some are bastardised versions of old adult songs. Thus, the poignant Civil War song *When Johnny Comes Marching Home Again* has been bowdlerised with some unbelievably stupid words about marching ants. They don't scan, either.

Perhaps that change was made because war is an unsuitable subject for small children — but why include the song at all, and why include the original version of the James Bond theme *Live and Let Die*? Anyway,

Kap'n Karaoke

Varied crooning for the kids

Single floppy

Price: \$59

WordPerfect Pacific

Phone: (02) 415 5222

with its long instrumental passages this is a poor choice for singing along. There are plenty of good choices — *Old McDonald*, *Twinkle Twinkle* and *This Old Man* — but, on the whole, the selection is very uneven. I find it difficult to imagine that a child that has mastered *New York, New York* in the style of Ol' Blue Eyes, will find any musical challenge in *Insey Vimsey Spider*.

Curse you, Red Baron!

By comparison, the music component of Yearn2Learn Snoopy (don't look at me, I don't invent these names) is a fish of a different kettle. The emphasis is on composing, of a sort. There are three music styles — jazz, rock and country — and in each you can cut and paste three snippets each of four instruments, but there is no control of tone or tempo. Playback is accompanied by an animated group, with Schroeder on the piano, natch.

Music is only a minor part of the Snoopy package, though. There are five segments reflecting pretty-much the standard primary school ▶



Kap'n Karaoke has a nice interface — but is this a sentiment you want your five-year-old to express?

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This tape, along with the others in the series, is a tremendous resource for anyone wanting to get the most out of their Windows software. Sections include a quick guided tour of Windows, the Windows interface, terminology, dialogue boxes, global commands, personalised Windows, starting applications, and more. This tape will help you feel comfortable working in the powerful Windows environment.

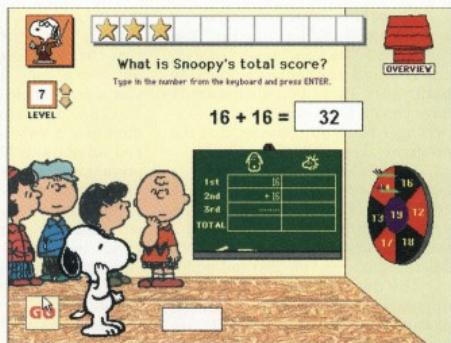
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Mental arithmetic doesn't seem to be taught a lot these days, so hooray for Snoopy. I mean, wouldn't you feel silly using a pocket calculator at your next darts game?



curriculum: music, cartoons, drawing, spelling and arithmetic.

The cartoon segment features four brief semi-animated cartoons starring the Peanuts gang. The hot-spots set off minor funnies accompanied by a limited range of noises, which should be appreciated by the recommended three to 10 age range. There's a bit of passive literacy training smuggled into this segment as the captions are read out, with each word being highlighted in turn. You can also click on a word to hear it read again.

The drawing segment is another educational lightweight, but does raise some giggles from the intended audience. It operates in two modes; you can either assemble a face from a selection of noses, eyes, mouths and so on, or edit one item at a time with a paintbrush-type tool. You can also click on a poker machine button to produce a random combination.

Where it comes down to reading and 'rithmetic, the educational content gets serious without letting up on the entertainment. There are some splendid spelling and mental arithmetic drills camouflaged as games featuring Snoopy, with adjustable levels of difficulty spanning the full age range (although it would have to be a really bright three-year-old to do any mental arithmetic at all).

As a program, Y2L Snoopy worked fine, although it might be a little jerky on a single-speed CD reader. In that case, you can install it

Year2Learn Snoopy

Primary school learning with the Peanuts gang

CD-ROM

Price: \$79.95

Dataflow

Phone: (02) 310 2020

totally to hard disk. I found one irritating flaw in the installation program: it promised to allow the installation directory to be specified, then didn't.

Serious reading — and thinking

A more solidly educational item is Reader Rabbit 2 from the Learning Company. To be sure, the learning pill is wrapped in plenty of entertaining sugar, but the kid (six to eight years) that sticks it through will pick

up a good deal of reading and language skill.

I'm pleased to see that the pedagogic experts who designed and field-tested this program share my views of the virtues of drill, drill, drill — all four games can be continued for as long as the student cares, with randomly varied contents. Perhaps it's a weakness that there's no defined finish, but there's plenty of applause and cheers to spur on successful work. Maybe the kids in the target age group have enough maturity to continue running the games for the sole reward of seeing their cumulative score creep up; the experts should know.

RR2 contains four games, each at four levels of difficulty. The games are quite interesting and aim to practise different aspects of word skill. The Word Mine concentrates on making compound and combined words; the Vowel Pond lets you catch fish carrying words with certain vowel sounds; the Alphabet Dance practises arranging words in alphabetical order; and the Match Patch lets you pull carrots marked with rhymes, opposites and homonyms. The Match Patch also puts some pressure on your memory — you can ▶

Reader Rabbit 2

Memory, reading and word games

Two floppies

Price: \$79.95

Dataflow

Phone: (02) 310 2020

The Match Patch from Reader Rabbit is a two-level challenge because it tests memory as well as word skills. Animation and noises add to the fun



only look at two carrots at a time and you're scored on how many times you pull each out.

Reader Rabbit 2 is a sequel to a DOS program, which is always a good sign. The program works smoothly and has a good feel to it.

Not just crayons

Crayola Art Studio is something of a heavyweight in this company and clearly shows the graphics expertise of vendor Micrografx — better known for its professional tools, Designer and Picture Publisher.

That's not to say it's less fun for the kids; on the contrary, it has a zany humour that had my test kids searching for every joke and gimmick. Some of the colouring book exercises produced real gigglesstorms.

As you might imagine, this product centres around a drawing program which I'd regard as a well-judged blend of simplicity and sophistication, suitable for ages six to 11, judging by the test panel. The simplicity lies in the tool metaphors — crayons (obviously), marker pens, watercolours, erasers and flood fill — and the results are sophisticated. The texture and transparency varies according to the selected tool, which behaves very much like the real thing. In some cases you can choose the shape of the tool, in others the shape of the stroke. The flood fill is distinctly up-market in that it has a wide choice of colour gradients.

Because the drawing tools in Crayola Art Studio act like their real-world counterparts, it's easier to learn and use than many high-end packages. This picture of Tammy the Platypus was drawn using a mixture of crayon, water colour, marker pens and colour flooding

There are other tools that go beyond the drawing function. You can add in "stickers" (cartoon-style clip art) and animated snippets. In both cases, there is a surprisingly large choice. Or maybe it isn't so surprising when you consider that the program takes 17Mb of hard disk!

There's a text function with a good choice of fonts and sizes, a "crazy lines" function which draws patterned lines with a head and a tail, a "splash" function, and both delete (with sound effects) and undo.

The drawing module has been extended to provide kid-type fun and games in several ways. There are "colouring book" templates combined with several kinds of games, forms to build certificates, note paper and badges, and a word guessing game.

What really blew me away, though, was the picture-show maker. Once you have saved a few images to the "gallery", whether painted from scratch or out of one of the colour-in modules, you can actually create a multimedia presentation. Sure, it's unsophisticated in the sense

Crayola Art Studio

Drawing and painting for kids (without having to clean up afterwards)

Six floppies

Price: \$95

Micrografx Australia
Phone: (02) 415 2642

that you can't save the presentation and the only effect available when you click the Effects button is the duration of each slide, but it's a long way above a mere drawing program.

The same can be said from a multimedia viewpoint. Noise effects and animations abound, letters are pronounced as you type and there's the usual spoken reinforcement.

The crowning touch for many parents is the "adult" menu, which is raised by a secret key combination and lets you, among other things, shut off the sound effects. It also allows you to save your offspring's artistic efforts as Windows wallpaper and screen savers, which is a nice touch.

Thoughts after

All of these programs, being American, suffer from the Language Imperialism Syndrome: pronunciation and spelling are to US standards (eg "zee" instead of "zed", and "color" for "colour"). This doesn't seem to concern a lot of people, though, or maybe we have just been desensitised by the flood of American TV entertainment, not to mention a sad proportion of teachers who don't care what the kids write, as long as they're consistent.

Two of these programs — Yearn2Learn and Reader Rabbit — share a sort of graphical inferiority complex; they are designed to run on a standard VGA machine at 16 or 256 colours, and if you have more colours they refuse to run. Reader Rabbit 2 even whinged about my 1,024 by 768 screen, but condescended to run just the same.

Bearing in mind the increasing numbers of Windows systems running 65,000 and more colours at very high resolutions, it would be a good idea for the software vendors to allow their babies to work in such environments (which is no big deal if they adhere to the Windows programming standards). It's such a damn nuisance to reconfigure the video mode every time you run something for the kids, that it must induce serious buying resistance: if, that is, the dealer warns the intending buyer about this problem. ■





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MULTIMEDIA SOLUTIONS

Multiplatform displays

RasterOps has introduced a line of multiplatform, high-resolution colour displays. The ClearVue Colour 17 and the ClearVue Colour 20T are mid/large-screen colour displays. The ClearVue Colour 17 supports resolutions of up to 1,024 by 768 and the ClearVue Colour 20T provides 1,280 by 1,024 resolution.

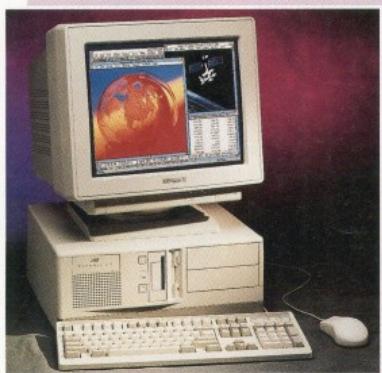
The ClearVue Colour 17 integrates into mixed Apple and PC/compatible environments. It is fully compliant with the US

Environmental Protection Agency's Energy Star specification of reduced power and meets the Swedish MPR II standard for emissions. The ClearVue Colour 20T uses a Trinitron screen. It offers ergonomic features such as tilt/swivel display; front panel digital controls; anti-glare, anti-static screen; and a flicker-free refresh rate.

The ClearVue Colour 17 sells for \$2,100 (ex tax) and the ClearVue Colour 20T for \$4,550 (ex tax).

RasterOps/TrueVision

Phone: (02) 959 2240



AST's dual Pentium machine, the Premmia GX

graphics VRAM and provides 75Hz screen refresh rate and a resolution of 1,280 by 1,024, non-interlaced, supporting up to 16.7 million colours.

The machine also ships with FlashBIOS and security features.

FlashBIOS includes asset management tools and Desktop Management Interface. It allows users to upgrade over the network and track multiple systems from a central point. Walk-n-Lock is one of the security features that ships with the machine. It protects data when the system is running but unprotected.

The Premmia GX P/90 model with 16Mb RAM, a 730Mb hard drive and double-speed SCSI CD-ROM will sell for approximately \$9,799.

AST Research

Phone: (02) 415 5400

CD of OZ art

Art Right Now is an interactive multimedia CD-ROM on contemporary Australian art. Aimed at the year 11-12 education and general reference library markets, it runs on either Windows or Mac.

It showcases artworks by 48 Australian artists and features 450 artworks in a variety of media. There are paintings, drawings, prints, sculptures, 3-D forms and illustrations. The CD-ROM includes explanatory text, artists' comments, and thematic slide shows.

Discovery Media

Phone: (02) 369 4314

Low-cost PCI graphics

Sprinter Products has announced a local bus graphics accelerator, the Hercules Stingray PCI. Based on an Advanced Logic ALG2301 it includes a set of hardware graphics acceleration features and provides a range of colour depths from 16 to 16.7 million colours.

It implements VESA Display Power Management Signalling (DPMS) and supports systems and monitors built to meet the EPA's Green PC requirements.

The DPMS mechanisms reduce the power consumption of the graphics board to less than 50 percent of full power when it is in



The Stingray local bus graphics accelerator card

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- Diagnostic utilities let you configure SCSI device parameters, check media, and thoroughly test devices
- System and media browser books let you examine your computer's hardware, operating system and CDs

Sound Features are Added to your Computer

- CD Audio player features an advanced interface, multiple player modes, database utilities, CD-Digital Audio recording and a WAV file conversion utility to record and save sound clips
- WAV File Editor, an OLE application, lets you edit and modify WAV and VOC files

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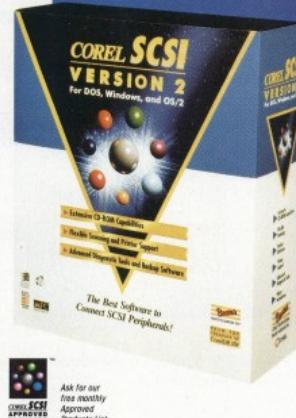
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Multimedia authoring tool

ShowHOW version 2.0 is a multimedia authoring tool for creating computer-based instructions. Features include full motion video, sound, animation and hotspots. A ShowHOW application consists of one or more visual instructions containing a number of windows with one or

more scenes. A user accesses the information they require by making button selections, which effectively navigates through the scenes, windows and instructions of a ShowHOW application.

The ShowHOW package includes an Authoring System, royalty-free runtime system, symbol sets, window templates, sample applications, Author's Guide and reference manual and on-line help.

The Authoring System has a



ShowHOW lets users create computer-based instructions without programming

floating toolbox, toolbar, status bar and on-line help. It has Design and Run modes.

ShowHOW supports DDE and can act as both a destination or source application.

The symbol library includes sets of symbols which authors can drag and drop into visual instruction windows. Author's can also create and add their own symbol sets.

Competitive Advantage Technology
Phone: (03) 758 7642

standby mode. Stingray VL for VL-bus systems is also available. Both cards sell for \$297.

Sprinter Products
Phone: (02) 938 3388

64-bit true colour graphics accelerator

The ATI Graphics Pro Turbo is a 64-bit graphics accelerator. Based on the ATI mach 64-bit graphics card, it is designed for professional true colour graphics applications such as CAD and DTP.

Features include full graphics acceleration at all colour depths and

screen resolutions; an ATI WinSwitch for on-the-fly resolution and colour depth switching in Windows; and colour calibration software for colour matching. It is available in two memory configurations: 2Mb and 4Mb VRAM.

The 2Mb version offers 24-bit true colour at 800 by 600 and the 4Mb version provides true colour at resolutions up to 1,280 by 1,024. The 2Mb version can be upgraded to 4Mb with a 2Mb daughtercard.

Other features include an ATI DeskTop control panel that provides access to frequently used graphics card controls, the FlexDesk Control

Panel that provides access to the WinSwitch utility, and the Windows control panel that allows control of ATI's DeskScan pan and zoom feature.

The ATI Graphics Pro Turbo 2Mb version sells for \$845. The 4Mb version sells for \$1,295, and the 2Mb memory upgrade module for \$450.

Anabelle Bits

Phone: (02) 313 6155

Multimedia Office

Creative Technology has extended its multimedia kit family with the announcement of the Sound Blaster MultiMedia Office.

Designed for the SOHO markets, it features Sound Blaster 16 with Advanced Signal Processing, a Creative double speed CD-ROM drive, Microsoft Office Professional 4.3, Microsoft Encarta '94 Encyclopedia, Microsoft Sound System 2.0, as well as Voice Assist, TextAssist, microphone and headphones.

VoiceAssist is a speech recognition program and TextAssist is a text-to-speech system. It also includes audio compression software, hardware for voice annotation, and audio software utilities. Microsoft Office Professional includes Word 6.0, Excel 5.0, PowerPoint 2.0, Access 2.0 and MS Mail 3.2.

SoundBlaster MultiMedia Office will sell for \$1,099.

Creative Pacific
Phone: (02) 906 8887

Aldus accessories

Aldus has announced Aldus ChartMaker, a software module that allows users to incorporate charting into standard Windows or Macintosh-based software applications.

It is a full-featured OLE module that can be used with word processing, spreadsheet, computer illustration, page layout and design or other applications to provide a range of charting functions, including 2-D and 3-D chart types, directly with a user's primary application.

It is the first in a series of

modular software products, called Aldus Accessory Products, to be released in the next 12 months.

Aimed at graphics and business professionals, each module will focus on a single function that will add functionality or features to a host application software package.

ChartMaker offers 84 distinct 2-D and 3-D chart types that include a wide array of special effects. Chart types include radar, spectral map, histogram, bubble and open/close charts. The chart formats include the ability to display line and bar charts either vertically or horizontally.

ChartMaker ships with predesigned chart templates and offers users the ability to customise their own.

Aldus Software
Phone: (02) 418 8488 ■

Photo editor

Composer is a photographic image editor that allows photographic objects to be moved, sized and layered as though they were vector objects in a simple draw program.

The Windows-based package allows image positioning, transparency, colour and quality control and supports a range of editing, pasting, cloning, outline and texture mapping features.

The program offers TWAIN scanner support built-in and import and export capabilities supports TIFF, JPEG, BMP, Pixar and PhotoCD images. It also exports PostScript and EPS format files.

Altamira's Composer sells for \$1,190.

Loko Vision
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Altamira's photographic image editor,
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Ages of adventure and mystery

By Mark Stafford

The packaging of *Myst* makes an immediate appeal to your highest altruistic tendencies: "A great injustice has been done . . .", it claims, and you're the one asked to do something about it.

This multimedia CD is not of the set-lasers-for-kill variety, where the instructions may as well read, "if it moves, kill it". *Myst* is an adventure, pure and simple (well, maybe not that simple). *Myst* was developed by Cyan, who, apparently, have created other "non-threatening exploratory environments", like the wonderfully-named "Spelunx and the Caves of Mr Seudo".

The betrayal

Myst's scenario is that a gentleman named Atrus has been tripping around from Age to Age, meeting new civilisations, constructing public works for them, and generally playing the socially-aware dimension

traveller. But something has gone awry in the Channelwood Age, and Atrus suspects his sons, Sirrus and Achenar. Or maybe someone from another Age is responsible? It's up to you to discover the identity of "that betrayer of ages, that destroyer of cultures, that defiler of sacred traditions".

To solve the mysteries of *Myst*, you have just one life. As the marketing spiel states, "just like real life, you don't die every five minutes", so one is probably all you'll need.

Myst installed painlessly and very quickly, claiming 4Mb of my hard disk. The customary 4Mb of RAM is required, but of course the more the better. I ran *Myst* on two systems: both 66MHz 486DX2s, one with 16Mb of RAM and one with 8Mb.

If you have a Sound Blaster 16 card, the installation notes strongly recommend that you install the

supplied 1994 versions of the card driver and configuration utility. Unfortunately, this is not an option handled automatically during installation, so you have to copy the files and reconfigure the sound card — but without those new files I had one system crash and the sound dropped out several times.

Once you start *Myst*, a mouse click will bypass the introduction, although it's certainly worth watching a few times. A mouse click will also skip the closing credits when you quit.

A virtual world of puzzles

I rarely have the patience for puzzles, and normally tire quickly of anything that requires me to *watch closely*. But this adventure had me eagerly roving about the *Myst* island world, noting as many details as I could, knowing I'd need them later. I found recommended settings for a machine (but didn't find the machine), read Artus's beautifully-bound journals, and tripped plenty of marker switches.

There always seemed to be one more piece of the puzzle lying about to lead me on. But I still had to get across to the clock tower, still had to work out those generator settings, and still had to get into the funky spaceship. And what is the significance of that monstrous tree?

Myst is not an interactive movie/game, like Media Vision's *Quantum Gate* or *Critical Path*. Rather, it is a blend of stills and animation clips, supported by an original soundtrack. The overall impression you get of *Myst* is quality. Throughout my island wanderings, I remained amazed by the standard of the still images. You only need to look at the detailed parquetry floors,



I'm sure this model ship is significant. Note the pointing hand cursor which is all you need to move about



I think I could have left the island if I'd figured out how to get into this thing

the exquisitely-rendered trees and the shadows that they cast to appreciate the effort that has gone into this product.

So possibly one of the best compliments I can pay *Myst* is that, after exploring the island for a couple of hours, I was nowhere near bored.

But, as the instructions forewarn you, there are times when you just don't have a clue what to do next, except maybe saunter another slow lap of your virtual island. The *Myst* developers quaintly call these occasions "hitting the wall". For these times, however, they do proffer advice quite similar to the DON'T PANIC! on the cover of the *Hitchhiker's Guide to the Galaxy*: in *Myst*'s case, it's DON'T THRASH! I believe thrashing refers to the understandably human response of

aimlessly clicking the mouse all over the screen, hoping for divine intervention.

But if you're a definite thrasher like me, there is always the *Myst* Hints leaflet included in the packaging. This little teaser gives you three hints for conquering *Myst*, and was a source of considerable temptation. I resisted for about an hour. (Hardcore cheaters can order the *Myst Official Game Secrets* book.)

The invisible interface

In many respects, the most impressive thing about the *Myst* interface is that there isn't one. By that I mean there are no navigation or "Pick Up This Object" buttons to clutter up the screen, so you are left to concentrate on the "alternative reality" you are exploring. You move about the island by simply clicking the pointing hand cursor where you want to go. To pick up an object, flick a switch or turn the page of one of Atrus's journals, you just click on it. The pointing hand cursor becomes a grabbing hand when you can move an object that you've found.

There's a menu, but that too is unobtrusive. It appears when you move the cursor to the top of the screen or press the <Alt> key, and has the normal options for saving and retrieving games, plus a few playing-mode options. There isn't a Pause option, and not even displaying the menu will stop an anima-

tion from playing. This would be annoying if *Myst* was a flame-throwing action game, but since it's a little more cerebral than that, if you want to pause your progress just don't click on anything. The whole system works simply and smoothly to help you concentrate on the puzzles of *Myst*, rather than what key to press and when.

The Making of *Myst*

Your *Myst* CD comes with an ominously thick journal in which to record all the clues you find. There is also a Trouble Shooting Guide with information on memory issues, and sound and video card compatibility.

But by far the best *Myst* extra is on the CD itself. The *Making of *Myst** is a QuickTime movie which installs automatically with the main application. The title of this short movie gives the plot away, and it is a fascinating insight into the way such titles are developed. *Myst* was two years in the making, and we listen as the authors, artists and tech-heads talk about what they were trying to do and how they did it, from initial paper sketches through to the finished multimedia product.

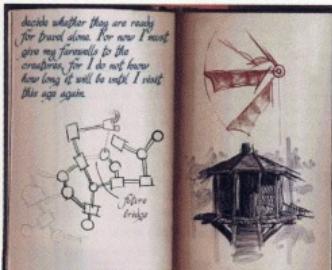
The origin of *Myst*'s sound effects was particularly interesting. Just as the buzz of Luke Skywalker's light sabre in *Star Wars* was a recording of a vibrating steel cable that held up a power transmission tower, we learn that the chime of the *Myst* clock tower is the slowed-down sound of a vibrating 7/8in spanner. And on the far left side of bizarre, the sound technician reveals that he produced the bubble sound effect by blowing bubbles through a straw in a toilet bowl, which he duly demonstrates. Some people take their work very seriously. ■

Myst

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Dataflow

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A page from the journals of Atrus

The C word

By Neale 'Muck-raker' Morison

In every society there are topics people just don't talk about. Until fairly recently it was possible to say what these topics were: bodily functions, as I remember, were frowned on. Sexually transmitted disease wasn't a sure-fire dinner party topic, and death used to be a bit of a downer. All that's changed.

If you've ever caught a sideways look at the daytime shows hosted by Donahue or Oprah you may now find it difficult to say what the forbidden topics are. You can bet certain topics which don't fall into line with the relentless Political Correctness movement may be among them. There are still forbidden topics, but we don't talk about them so we've forgotten what they are.

Actually, they disappear into the dark recesses of your mind and it's terribly important to expose them. Why? Because we unquestioningly accept the pseudo-psychological cant that says we heal ourselves by opening mental wounds and rubbing salt into them. Furthermore, we are prone to become fat, smug and complacent and think we know everything, and we need to be regularly shocked and horrified.

What are the forbidden topics in the virtual community? There are no bodily functions here (although you can download fart.wav), there is no death (unless you play megaviolence games), and computer viruses are discussed with as much enthusiasm as STDs. What's a topic you can raise if you want to draw a bit of flak?

Content, the C word. Does the emperor — or in this case the information superhighway — have any clothing, or is it a figleaf of our imagination? How to find out? The same way you find out anything in CompuServe: post a question in a few forums and wait for the replies.

I embarked on the quest for the C word almost inadvertently, seeking

the solution to a simpler question. I kept noticing that when I read the message threads in a forum, they'd start in the middle, and even if you had several consecutive discussion messages, it was seldom easy to discover the topic of conversation. Often the threads seemed to be a private conversation.

You'd get threads that went:

To: Fred

From: Joe

Subject: Solving memory leakage
problems in mission critical
Windows applications

Text: My dog has something like that.

To: Joe

From: Fred

Subject: Solving memory leakage
problems in mission critical
Windows applications

Text: Try alfalfa sprouts.

Very difficult to participate, or to extract meaningful information. So I posted a question about the missing first messages, and on the end I tacked a question about what the attitude was on these private discussions. The answer to the missing first messages question was a simple technical one. Here's just one reply: ▼

On the surface, a frank informative reply — but there was something in the tone here, a faint suggestion that we may be approaching a forbidden topic. Any sort of e-mail system seems to amplify the attitude in a block of text, with the result that people become deeply emotionally involved in the course of an apparently innocuous discussion. You have to be wary of your turn of phrase.

One approach is to pepper your e-conversations with those little "emoticons" you view sideways:

: -) just kidding

>:(more in anger than sorrow

@: ~ } winking with a weird hair cut, a broken nose and a crooked smile.

But that approach is a bit like putting "(joke)" after a joke, or making little quotation marks with your fingers when you're being facetious.

There were many replies, many of which were friendly, some of which agreed that it was annoying to read a message thread and not be able to follow it. Most replies suggested that the best approach was to hang around the forum regularly. If it's a thread you started, messages scrolled off the forum appear in your electronic mail, but if you didn't start the thread the messages aren't addressed to you, so you just miss them.

So I posted another question, on the CompuServe Literary forum where I got the most replies to my ▶

To:	Neal Morison, 100250.1133	#57220, No Replies	1 of 1
From:	Tony Anderson, 76703.4062	May 1994 20:36:08	
<p>"Missing messages" are an artifact of the software you use to access CompuServe. Each forum has a "high message counter" that keeps track of the highest message number you have actually read, so that the next time you come in, you don't have to read the same messages again, thus costing you more money than necessary. Once your counter is set to a specific message, previous messages seem to be gone, but are actually still there, the software is just preventing you from reading them. You can, of course, reset your high message counter, or with direct commands, read any message you want, from the beginning of what's currently on the message board. However, you also need to be aware that these open forums have a finite number of message slots, and as new messages are added to the top of the queue, old messages scroll off the bottom of the queue. Technically, old messages actually drop off once a day, during routine maintenance, but the principle is the same.</p> <p>As for "private conversations", if people engaged in private conversations, there would be no open discussion in the forums at all.</p>			
<input type="button" value="More"/> <input type="button" value="Up"/> <input type="button" value="Down"/> <input type="button" value="Topic"/> <input type="button" value="Map"/> <input type="button" value="File It"/> <input type="button" value="Reply"/> <input type="button" value="Delete"/> <input type="button" value="Cancel"/>			

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first question. I asked if anyone had any views on content, and pointed out that there was a problem — especially if, as an Australian, you're paying high charges for CompuServe — if you spend too long sifting sand for nuggets. Is this a political issue, I asked? This provoked a real storm of replies, some passionate. Here's one: ▼

articulate. These people not only had strong ideas and opinions, they could spell them!

I made a faint-hearted attempt to backtrack a little in my next message. To tone down the idea that I might have been complaining about the content of this forum, I said I was a journalist and was perhaps being

subject headings when you changed the subject, to make it easier for readers. His message was under a new thread subject heading: *Count Me Out, Neale*. He has refused permission for me to quote him verbatim, but the gist was that if I was starting a thread simply to be controversial and political he didn't want to spend his time that way.

I began to see myself in a voyeuristic light, a stranger who visits a community then takes back half-baked impressions to reinforce his prejudices and those of his audience.

I was beginning to like this forum, but there was no point complaining about the content. I hadn't really run to ground my questions about content in CompuServe but I had found a community full of interesting people. Most agreed that they preferred an unregulated environment. The screen below shows how one person saw it.

It's obvious that the virtual community has cast its vote: you can't regulate content without losing the thread.

• **Neale Morison can be reached by e-mail on CompuServe 100250,1133**

To: Neale Morison, 100250,1133

From: Mac Beckett, 72237,2271

#455085, 2 replies

May 1994 14:20:30

1 of 1

Bloody right it's a political issue. Who gets to impose his "standards" upon whom?

Not you on me, cobber, even if I do sympathize with the money problem.

What's "worth reading" to you, is a pain in the @ss to somebody else.

This is a community, Neale. The only BBS I know of, and the only Forum in that BBS that is one. It functions this way because of some additive process in the rich chaos of crosslinked information that suddenly became something else -- something more. The Forum is more than the sum of its parts -- but even that sum is not a calculable thing.

Whatever the juice that powers the existence of this place, and I doubt we'll ever know that fully, one thing that is certain is that if we regulate it, we kill it. And turn it into just a database.

I will neither back nor support any attempt to regulate what goes on here. I don't know, but I suspect that information which is labelled one thing and turns out to be another may well be an important part of the spark of the life of this place. I end up reading and knowing a lot of stuff I don't want to know [mostly the stuff you do want to read, I suspect] and it enriches me. So I grow, and contribute in some silly way to the growth of the manic organism which is LiForum.

Of course, one learns Terence's shirt-size, and all about Sharone's and Barbara's aircraft-phobia, and a little bit about Bill's notion of what makes writing good, and some of what Janet's cats are doing this week.

Some of it fascinates me, some of it bores, some of it angers me, and some, I just don't retain. And I need "all" of it.

Without the crosslinking, the place would be susceptible to organization, and organization is the death of a living thing that depends upon chaotic crosslinking for its information-diet.

FWIW, IANAL, and bbt

OMG And welcome to the madhouse! Have you heard about Terence's new computer? Lunch is in an hour, drinks instead, if you like. Have a banana!

Yikes! It ends in a friendly enough way, but it seems to start with the idea that the ratbag from Australia is saying something definitely not politically correct. Nice stuff, though. It turns out Mac Beckett is a science-fiction writer from Canada.

Another reply said, "No doubt all of this is the price one pays for getting into the creative mix of things. So what's a few extra pennies for a meaningless message when you might accidentally download a diamond?" And another, "Seems to me this is a hard call because one man's trash might be another one's treasure."

It seemed I had stumbled on to one of those virtual communities you read about. This one was special, because all the replies seemed to be

deliberately controversial to stimulate discussion. Oops!

I got a reply from someone who had previously been very helpful, supporting the idea of starting new

To: Neale Morison, 100250,1133

From: John Woram, 72470,47

#454298, 1 Reply

May 1994 11:21:19

1 of 1

Hi Neale, I think I can tackle part of your inquiry—even if a conversation between two people seems private, it isn't. If a message is truly private, the sender marks it that way and no one sees it, except the person to whom it's addressed. Otherwise, the subject is public and everyone's encouraged to join in. If no one does, it's because no one's interested enough to do so. And there's just no way to guess what it takes to comment. FWIW, I've been hanging out for a few years, and if there's one thing I can be sure of, it is that I haven't got a clue how to start a chat-up. Now, now, and then I post something that I "know" will grab a response—and the silence is deafening. It's like throwing a pebble into the Grand Canyon and waiting to hear the splash. Other times, I'll post an innocuous message and get a broadside in return. Couple weeks ago, I commented on the pronunciation of a 17th-century diarist, finding at the time that I was speaking into a black hole. Well, was I wrong! I got a mixed bag of retorts, insults, helpful info and such that has only recently died down. In fact, the conversation even went on without me for a week or so while I was out of town. The bottom line is, if you can read it, it's not private. Sometimes it's boring stuff. I usually tune out when folks start discussing the habits of their cats, or their favorite recipes—topics which seem to enjoy great popularity here. Such threads can go on for weeks—which bores me, as much as my own interests bore others. But they put us with me, so I do likewise. Bottom line is, there's no subject filter that works for everyone. So, join in when the topic interests you, start your own threads but don't despair if some of them are ignored, and . . . enjoy!!

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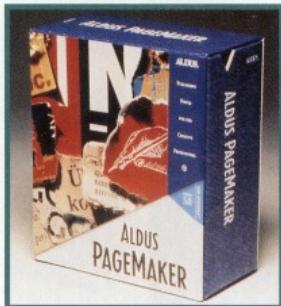
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REVIEW OF REVIEWS

Products reviewed in previous issues



ELECTRONIC PUBLISHING

CorelDraw 4.0

Desktop publishing program

Pros: Includes 750 fonts; improved masking and image correction
Cons: CorelShow can't create outlines, speaker notes, or maintain the formatting of multiple-column pages

Summary: CorelDraw 4.0's array of brilliant tools is sure to please desktop publishers, professional illustrators and business users alike

Merisel

Phone: (02) 882 8888
First Look September 1993

Express Publisher for Windows 1.0

Desktop publishing program

Pros: Imports EPS graphics cleanly; proprietary option for updating graphics and text files
Cons: Doesn't support OLE; lacks an irregular text wrap feature

Elsewhere in this issue we look at scanners and electronic publishing. If you are looking for a particular version or model that is not covered, we may have reviewed it in a previous issue.

Below we have listed all the products included in recent reviews, first looks and product comparisons.

We have not included prices, since they are continually changing.

For a complete list of comparisons, reviews, first looks and features, see PC World's six-monthly index, in the December/January and July issues each year.

If you would like a copy of a previously published article, send \$5 for each article to:

Review Copy

Australian PC World

88 Christie Street, St Leonards, NSW 2065

Summary: With a trial-and-error venture like page layout you really need more features

Softcover Software
Phone: (02) 957 4010
Feature August 1993

CA-Cricket Presents

Low-end Windows presentation software
Pros: Can import charts and other files using the Windows clipboard

Cons: Lacks multimedia effects, lacks extensive charting capabilities
Summary: A low-end package with basic tools

Computer Associates
Phone: (02) 923 2066
Review April 1994

Publish It for Windows 3.1

Windows-based desktop publishing program
Pros: Lets you contour text easily around irregularly shaped graphics

Cons: Lacks support for OLE and small caps; no Undo command

Summary: Wraps text around graphics of any shape and lets you adjust the bounding box that surrounds the image
Dataflow

Phone: (02) 310 2020
Feature August 1993

Microsoft Publisher 1.0

Electronic publishing program

Pros: Features OLE and table support
Cons: Lacks style sheets

Summary: Has some of the necessary tools for creating long documents but lacks style sheets

Microsoft Australia
Phone: (02) 870 2100
Feature August 1993

PageMaker 5.0

High-end desktop publishing package
Pros: Sophisticated typographic and colour support; cross-platform capabilities

Cons: Add-on features (Additions) could be better integrated

Summary: A well-rounded desktop publisher for uses ranging from newsletters to magazines

Aldus Corporation
Phone: (02) 418 8488
Review October 1993

QuarkXPress 3.3

High-end Windows and Mac colour publishing software

Pros: Cross-platform compatibility and enhanced colour manipulation features

Cons: Colour calibration is more Mac-oriented

Summary: Continues to be a must-have product for high-end colour publishers

Mitsui Computer
Phone: (02) 452 0452
First Look June 1994

SCANNERS

GT-6500

24-bit A4 scanner

Pros: Easy to set up; 24-bit colour; 300dpi resolution; includes image editing software

Cons: None significant

Summary: Flatbed scanner that reads images up to A4-size in full colour or 256 greyscales

Epson Australia
Phone: (02) 452 0666
First Look September 1993 ■

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Actix Pro-Star 1MB Windows Card	\$245
Hercules Dynamite VLB 1MB Windows Card	\$330
Samsung 14" SVGA Colour Monitor	\$435
Samtron 15" SVGA Flat Screen Monitor	\$650
Sony Trinitron 14" Digital Monitor	\$888
Sony Trinitron 17" Digital Monitor	\$1,950
Creative LAB. SB-16 PAK	\$575
MS DOS 6.2 & Windows 3.1	\$170

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AVO 486SX Budget Workstation

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- * Intel 486 SX 33 Mhz
- * 4MB Expandable to 32MB
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- * Samsung 14" SVGA Colour Monitor
- * Keytronic Enhanced Keyboard
- * MS DOS 6.2

AVO 486SX Multimedia Pak

\$2,795

- * Intel 486 SX 33 Mhz
- * 8MB RAM
- * 1.4MB Floppy Disk Drive
- * 340MB Hard Disk Drive
- * Trident 8900 1 MB
- * Samsung 14" SVGA Colour Monitor
- * Keytronic Enhanced Keyboard
- * MS DOS 6.2 & Windows 3.11
- * SB Discovery Multimedia CD ROM Pak

AVO 486DX Smart Graphic System

\$2,950

- * Intel 486 DX 33 Mhz
- * 8MB RAM
- * 1.4MB Floppy Disk Drive
- * 270MB Hard Disk Drive
- * Hercules Windows Accelerator Card
- * Samtron 15" SVGA NI Colour Monitor
- * Promise Tech VLB disk controller
- * Keytronic Enhanced Keyboard & Mouse
- * MS DOS 6.2 & Windows 3.11

AVO 486DX Power Windows System

\$3,595

- * Intel 486DX/2 66 Mhz
- * 8MB RAM
- * 1.4MB Floppy Disk Drive
- * 420MB Hard Disk Drive
- * Hercules Windows Accelerator Card
- * Sony Digital Trinitron 14" Colour Monitor
- * Promise Tech VLB caching disk controller
- * Honeywell Enhanced Keyboard & MS Mouse
- * MS DOS 6.2 & Windows 3.11

AVO Pentium Business Pak

\$4,495

- * Intel Pentium P5 60 Mhz
- * 8MB RAM
- * 1.4MB Floppy Disk Drive
- * 520MB Hard Disk Drive
- * PCI S3 Windows Accelerator Card
- * Samtron 15" SVGA NI Colour Monitor
- * Honeywell Enhanced Keyboard & MS Mouse
- * NCR PCI SCSI II disk controller
- * MS DOS 6.2 & Windows 3.11

AVO Pentium Professional Pak

\$6,688

- * Intel Pentium P5 60 Mhz
- * 16MB RAM
- * 1.4MB Floppy Disk Drive
- * 520MB Hard Disk Drive
- * Hercules PCI 2B Windows Accelerator Card
- * Sony Digital Trinitron 17" Colour Monitor
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PEARL Notebook

486/DX 66 4/250 Mono	\$3280
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XPRESS Soundbook

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Personal Computers

Expanding Your Horizons

Here be Tygers

Compared with the bad old DOS command-line days, PC computing has become so user-friendly that it's downright cuddly. Great, but that doesn't alter the fact that it's still tiger country out there, and the 17th century map I took my heading from is still relevant.

For example, you'll need to take care if you want to upgrade from MS-DOS 6.0 to 6.2 using Microsoft's Step-Up upgrade package (available from the Microsoft forum on CompuServe and a number of bulletin boards).

First, make sure you're not running a version of 6.0 modified by a hardware vendor. If you are, you'll need to upgrade with Microsoft's full MS-DOS 6.2 Upgrade package.

Second, be sure you have not deleted any system files, such as DBLSPACE.BIN, from your DOS directory or the root directory of your system. If you have deleted a file that the upgrade program wants to replace, the upgrade will not complete and you'll get an error message. In that case, you'll have to reinstall all of MS-DOS 6.0, then run the 6.2 Step-Up package again.

Most important of all, because there's no obvious warning or outward sign of danger, be aware that the upgrade program merely preserves your old SmartDrive settings rather than enforcing the new, default safer operation. Should you want the SmartDrive disk cache to be conservative about delaying writes to the disk, you'll need to edit your AUTOEXEC.BAT and set the SmartDrive options — type **HELP SMARTDRV** for a list — after the upgrade has been completed.



Send your questions and tips to
Jan Wikström,
Help Screen,
Australian PC World,
88 Christie Street,
St Leonards 2065.
Please include your telephone number if the question is urgent.

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Bombs away!

In last month's virus story (*Fighting the plague*, page 88), I mentioned ANSI bombs in passing. From comments received, this was news to most people so I'd better add a few words. ANSI.SYS is a character-mode screen driver that works under DOS and lets you do nifty things like display 50 lines of text, move the cursor around, change the foreground and background colours of different parts of the screen, and substitute keystroke strings for different keys on your keyboard. This is done by embedding control sequences in a text file, which are picked up by the driver.

The same sort of moral defectives that write viruses can use this to create ANSI bombs, which are control sequences that do nasty things to your system. Fortunately, ANSI bombs are not viruses and don't spread of their own accord. But they can still be a hazard — if you want to be quite safe, there are a couple of things you can do. The easiest is simply to get rid of ANSI.SYS; it's yesterday's technology, anyway.

If you do have a need for ANSI screens, I know two safe ways to live with them. One is to use Thunderbyte, as I mentioned in the virus article. The other is to get the latest version of PKZip, which includes an ANSI.SYS substitute called PKSFANSI. This will run all ANSI commands except the keyboard redirection ones, making bombs harmless.

The Fijian fax fiasco

I am the network manager, software trainer etc in a small organisation in sunny Fiji that is trying to implement a network fax modem for 10 to 15 people. It will only be outgoing. We run a LANtastic network (currently version 4.1, but we are upgrading to version 6), and we are in the Windows environment. The modem server is not dedicated, and cannot be. (Let me mention that it is not realistic for a small organisation to have servers dedicated for this type of thing.) We have an external Avtek MegaPlusFax V.32bis Class 2 modem.

We purchased Winport Network Fax Modem software by LanSource which comes with ViaFax software. Winport is the shell to the network and controls the server, while ViaFax controls the printing to a fax printer on the workstations. I purchased the software through our supplier here, who purchased from the US distributor. I received the software in February and later found out that I did not receive the most current version. The upgrade was received in early April, but it is still not working. When I received the upgrade, it was a faulty disk, missing the .HIP file which terminated installation so I had to leave the .HIP file from the old version in the subdirectory when I loaded the new version.

I found the original manual totally confusing, but it improved when I received a new copy with the upgrade. I have been in touch with technical support in Canada six or seven times and there are no answers as to why the software isn't working.

The software still has bugs that terminate all programs and re-boot the computer if you get the error message that says "No network check sessions from the modem server". ViaFax itself has a bug and fails on the first attempt at printing (faxing) in the first session of ViaFax, but is OK for all other attempts. The general pattern is that the modem server picks up the signal from the workstation and hangs up. The ironic thing is that the workstation on which I left the original Winport and ViaFax software is now able to fax, but with the original, unpredictable bugs.

I am not asking you to attempt to answer any of my questions: I would much rather have a recommendation as to what my options are. What network fax software should I use? I want simplicity and compatibility with LANtastic. Should I use the network faxing option that comes with LANtastic 6 when I upgrade? No-one in my country is running LANtastic 6 yet, so I have not seen it operating. Can I send this software that has caused me nothing but headaches back to LanSource and get my money back?

I would love to see a review of network faxing software for Windows in a future edition of *PC World*. Thanks for everything in the magazine: our

office would be a world better off if I could get others in the office to read the help articles and software reviews. Looking forward to a reply.

- Patti Reeder

A The products you mention are unfamiliar to me, but from your experience, they seem to be more trouble than they're worth — let's be kind and say that perhaps they're intended for another networking system. The service engineer of the Australian LANtastic distributor assures me that the network faxing option in LANtastic 6.0 will solve your problems and won't require add-in software — everything you need is built into LANtastic 6.0. You also won't need a dedicated fax server.

As for getting your money back, I would certainly expect the shop that sold you the software to do that if it values your continued business. I don't know what the Fijian law is, but I would expect something similar to the Australian rule that a product has to be useable for its stated purpose if the sale is to stand.

Backup or backup?

Q I have a query concerning DOS backup/restore. The standard backup on DOS 6 is not compatible with DOS 5. Is there a (reasonably) elegant way of creating a backup on DOS 6 that can be restored using an earlier version of DOS?

- Colin Darcey

A The answer is that there is and there ain't. DOS used to have a pretty basic utility called BACKUP, which was changed to a different format from version to version and "marked" so it wouldn't run under previous versions of DOS. Just between you and me, I think this is one of those little things software companies do to stop us cheating them — and why not. The cut-down version of Norton

Backup that comes with MS-DOS 6 is a different story: as a test, I've managed to run it under MS-DOS 5.0, so you could use it to restore backups done on an MS-DOS 6 machine.

The only obvious problem is legal. While you could put a copy of MSBACKUP on another system, you're only entitled to run your copy on the machine that has your MS-DOS 6.2 on it. I'm afraid that leaves only two rather inelegant solutions: upgrade to the same DOS on all your machines, or buy the required number of copies of a third-party backup utility.

Another option that suggests itself is to use PKZip to create a self-extracting library, which would let you transfer files to any computer regardless of its version of DOS.

A different ball game

Q I have been using DOS 6 and the DoubleSpace feature since the product was released. I also obtained the 6.2 "Step-Up" when it was released. Up until now I have had no problem. However, I now find that when starting some DOS games the message "DoubleGuard Alarm #14" appears and my system is halted. The warning message refers me to a read-me file but this does not give me information to solve the problem. I am perplexed that all of a sudden a problem has occurred. The problem programs have been reinstalled but the error message continues. Can you shed any light here?

- Gary Huckstepp

A One of the problems with DoubleSpace in DOS 6.0 was that it was vulnerable to rude programs that trampled the memory segment it was using. DoubleGuard was introduced in version 6.2 to warn when this happens, and thus give the user the chance to shut down (by switching off to prevent any of the possibly damaged data being written to disk). The ▷

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next step was to run CHKDSK/ ALL in order to clean up any damaged files.

The read-me file doesn't give any explanations of the alarm code, but does suggest that the program you're running at the time is not compatible with DoubleSpace. You noticed no sign of this under DOS 6.0 because there was no warning utility and no files got clobbered (that you know about . . .). I'd guess that all that was in the DoubleSpace buffer at the time were the files belonging to the game — which I'd say were read-only, so nothing was damaged.

Warning #14 says that a specific part of the buffer (the one that keeps the file allocation table) was damaged. I would strongly recommend that you don't run that game again with DoubleSpace active, and do run CHKDSK to clear up any existing problems.

My mouse has no tail

Q My questions are two in number: I have a UMC video card with 1Mb of RAM on-board, and when I select 800 by 600 resolution in 256 colours I lose the ability to have mouse tails. Also, I have the After Dark screen saver installed and when I am in 256-colour mode and select Scotties files, I have all the text on the screen but the graphics do not appear. If I select 800 by 600 resolution in 16 colours, I get the mouse tails back and also the graphics in After Dark. Is there anything I can do to get the mouse tails and the graphics in 256-colour mode?

My second question also concerns colour. I have changed the colour of my desktop to a nice aqua colour, which is very restful on my eyes compared to the default white. My only problem is that when I go to the help screen, the highlighted words in WinHelp are a baby-poo colour, which I find hard to read! I have tried to change the text colour under Control Panel to no avail.

— Robert Seckhold

A The problem with the mouse trail and After Dark is twofold. Mainly, it's the driver software for your video card and the only answer here is to ask your retailer for an upgraded driver. If the card is a current model, driver upgrades should keep coming for some time in order to cope with development of Windows and applications. After Dark, if it's an old version, may simply be unable to handle a 256-colour system; check what the manual says.

As for the colour of hypertext hotspots (highlighted words) in WinHelp, that's slightly complicated. Some help files contain colour settings, some contain settings that can be modified by an internal algorithm according to background colour, and some rely on system parameters. For the second and

third kinds, you can insert your own settings in the [Windows Help] section of WIN.INI. The basic ones are *JumpColor = red-value green-value blue-value* (default: *JumpColor = 0 128 0*), which specifies the colour of text that, when chosen, leads to a new window of Help information; and *PopupColor = red-value green-value blue-value* (default: *PopupColor = JumpColor*), which specifies the colour of text that, when chosen, displays a pop-up window. For more details, see WININI.WRI in your Windows directory.

The best way to edit WIN.INI is with the SYSEDIT.EXE utility, which you'll find in your WIN-
DOWS\SYSTEM directory. To install it for use, just drag the file out of File Manager and drop it into a Program Manager group (it doesn't have to be open at the time). Changes to WIN.INI only take effect after you restart Windows.

Spanning floppies with PKZip

Q I always compress files with PKZip or Arj before I put them on to floppy disk. I find that PKZip compresses files better than any other file compressor I have tried, but I am not able to zip files that are larger than one disk and that's when I use Arj. I read the User tip in the June issue of The Help Screen (page 186) that PKZip has a multidisk feature to make files span more than one disk. I have tried to find out how I can use this feature, without any success. How do I use PKZip's multidisk feature?

— Sean Levasseur

A If you get the current version of PKZip — 2.04g or later — and simply run it under DOS without switches or filenames, you'll get full instructions (look for "spanning"). Basically, you use the switch "-&" with add-on letters for what you want PKZip to do with the disks in the way of formatting and so on. You'll be prompted to change disks.

Is anyone there?

Q When I try to use my modem, nothing happens. I have tried using both ProComm and the e-mail program in Central Point Software's PC Tools, but all I get is a message saying "No carrier". What does this mean? I do have a carrier, don't I?

— Charlotte Moore

A To the communications novice, the "No carrier" message might sound like a request to sign-up with Optus or Telecom. But carrier means something different in the world of electronic communications. It is the audible tone a modem sends across the

telephone line when it communicates with another modem. Changes in the tone convey the data — the tone is "carrying" the information.

"No carrier" indicates that your modem is hooked up to your PC properly (if it weren't, you wouldn't get that message). It's also hooked up correctly to the telephone line, otherwise the message would be "No dial tone". But after the modem tried to place a call, it couldn't get a carrier tone from the modem at the other end.

This might be due to any number of causes, the most common of which is that your modem hasn't been given the right number to dial. If it has the right number, you need to do some troubleshooting, which could become complicated. Join your local PC User Group and get somebody in the Comms SIG (Special Interest Group) to show you the ropes. The Sydney PC User Group can be reached on (02) 580 9549.

Let there be order — part I

Q How can I make the DIR command in MS-DOS 6 list the files in a directory alphabetically? An alphabetical listing would make it easier to find files.

— Jay Masunaga

A DIR will sort your files by name if you enter the command DIR /O. You can make this the default sort order for DIR by putting the command SET DIRCMD=/O in AUTOEXEC.BAT. The /O stands for "order" and can be used with a colon followed by N, E, D, S, G and/or C to sort the listing by name, by extension, by date, by size, with directories grouped, and by DoubleSpace compression ratio, respectively. (You can use more than one letter.) To reverse the sort order, place a minus sign before the sort letter. For example, to display files and subdirectories sorted by extension, with

subdirectories grouped at the end and with like extensions sorted by file name, use DIR /O:GEN. For full details, enter HELP DIR or DIR/?.

Let there be order — part II

Q When I ran MS-DOS 5, I put SET DIRCMD = /O:N /P in my AUTOEXEC.BAT file. That setting causes DIR commands to display directory listings in alphabetical order, pausing at each screenful until I press a key. I recently switched to DR-DOS 6, which I think is the best DOS around. However, setting DIRCMD has no effect on directory listings. How can I accomplish the same thing in DR-DOS without typing DIR | SORT | MORE?

— Joe Wolff

A DR-DOS has a different command for fancy directory listings: XDIR (for "extended DIR"). It automatically sorts files by name, so enter the command XDIR /P to do the trick (the /P adds the pause between screenfuls).

If you want similar DIR functionality as MS-DOS but to stay with Digital Research, upgrade to Novell DOS 7. Its macro processor, named DOSKEY after the MS-DOS equivalent, will let you redefine the DIR command so that it's automatically interpreted as XDIR /P.

More misses than hits

Q I have a 486DX2-66 with 12Mb of RAM and a 340Mb hard drive. I am running MS-DOS 6.2 and Windows for Workgroups 3.1. I recently read about cache sizes for SmartDrive in the Best Windows Tips supplement to the June issue. My SmartDrive settings were 1,024 for DOS and 128 for Windows (which were set by Memmaker, I think). When I used the SmartDrive /s option as mentioned ▶

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Expanding Your Horizons

in the article, I found my cache misses were greater than my cache hits. I read the DOS help on SmartDrive and decided to set both cache sizes to 2,048, but I'm still not getting anything like a 7:1 ratio of hits to misses. In the Windows tips I also read that Windows for Workgroups 3.11 doesn't use SmartDrive so I'm still confused.

Do the hits and misses only relate to DOS operations? Could you please advise me on some optimum settings for Files, Buffers, SmartDrive and Windows swap files, etc? I do most of my work in Windows and use some large Access databases.

- Dan Hardison

A With those settings, you have to expect SmartDrive to perform poorly. The Windows minimum setting you have is much too low, as is the DOS one. With the amount of memory you have, 1,536 (1.5MB) for both would be closer to the mark. You should in fact get acceptable performance without specifying any buffer size. The 7:1 ratio isn't quite correctly expressed, for which I apologise — the formula should be hits plus misses divided by misses.

The result you get depends not only on the SmartDrive settings, but also on what disk accesses you have. If you keep closing and opening the same file, for instance, it's easy to rack up 100 per cent hits, and if you alternate between two large files on two different drives you can easily approach zero hits if you do it for long enough. It also makes a difference how fragmented your files are.

I don't know where you got the bit about Windows not using SmartDrive — it's the other way around. If you don't run SmartDrive and you install Windows, the Setup program will add SmartDrive automatically.

The settings you ask for vary a bit according to the sort of work you do. It sounds like 1.5Mb should be all right for SmartDrive, and there's an item on swap files in the Tips booklet (page 17) that should see you right. As for Files and Buffers, that's not so critical if you have lots of RAM, as you do — you can afford to err on the generous side. The default setting for Buffers is 15; the default for Files is 8, but 30 is more typical with Windows software. Usually, if an application needs particularly high settings, the installation program will take care of it. Oh, and make sure you run DEFrag before you start testing performance.

My own settings — on my private 486-50 with 16Mb of RAM — are SmartDrive without switches, Buffers = 15, Files = 80 and no swap file. The reason for having no swap file is that Windows is a bit simple-minded and uses the swap file even when there is tons of vacant RAM, which slows the system down. Without the swap file (set to None), I never run out of RAM with the particular applications I use and can move from one to another more quickly because the

complete programs are held in RAM. Try it, if you like; but go back to the recommended swap file if you get out-of-memory errors.

One page at a time

Q What is a page printer? Does it store data differently from a dot matrix printer? Why do low-end laser and inkjet printers frequently signal "out of memory" errors when they're asked to print relatively simple graphics?

- David King

A A page printer gets its name because it saves up the data for a full page, then prints the page. Thus, it needs more memory than a dot matrix printer, which prints one line at a time. Inkjets fall between these two categories: some are true page printers, while others act more like dot matrix units. When a page printer reports "out of memory" during a simple job it's usually because the manufacturer skimped on the RAM it provided with the printer.

Printer manufacturers often charge exorbitant prices for add-on memory, which means you should make sure there's a third-party memory vendor supporting the printer before you buy it. I also recommend that you start with plenty of memory: 2Mb is a good starting point for a 300dpi printer, while 600dpi printers may need up to 8Mb to print a full page at high resolution. If you buy a PostScript model, add about 2Mb for the overhead of that language.

Buffeting buffers

Q What's the best way to configure the buffer settings for my CD reader? Both the low-level device driver and the Microsoft CD Extensions driver (MSCDEX) support variable numbers of buffers, and the new SmartDrive has CD caching. Do these settings conflict? How do I get the best performance?

- Dave Rogers

A Many CD readers, as well as MSCDEX, attempt to improve drive performance by allocating a small cache for the data they think your program will want next (usually the data immediately following what the program just read). This really helps, because even multispeed CD-ROMs spin quite slowly compared with hard disks: if the drive misses the data the first time, it must wait a relatively long time before that data comes around again.

As with disk caches, you'll get the best results if you have lots of cache RAM and you maximise the size of the cache that's closest logically to the CPU. In this case, it's best to turn on CD-ROM caching in

SmartDrive (or an optimised third-party disk cache), and reduce the buffers in the drivers to their minimum sizes. But be sure that MSCDEX is loaded before the cache utility in your AUTOEXEC.BAT file, otherwise the cache will not recognise your CD reader.

The TWAIN are not talking

Q I work in an office that has a perfectly good HP ScanJet, one of the original models. Many new software titles call for TWAIN-compatible scanners. Is there any place I can go to get a TWAIN driver to help this old war-horse talk with the new programs?

—Mike Novak

A Hewlett-Packard isn't providing TWAIN support for many of its older scanner models. However, if you have any HP ScanJet other than the early 4-bit model, you should be able to get TWAIN support with the drivers included in Corel's CorelSCSI Pro and Corel Draw 4.0, as well as Picture Publisher 4.0 and possibly other products.

Rethinking on ink

Q Do you know if the ink cartridge in the Canon BJ-200 can be reused? It seems a bit wasteful to shell out \$50 or so for a new one each time it runs out of ink. Can I refill the cartridge?

—Dick Mason

A Don't toss out that old cartridge yet. Refills for inkjets are a growth industry, and plenty of kits are available to let you refill the cartridges for Canon, HP, IBM, Kodak, Tandy and other inkjet printers. Besides saving you money on cartridges and ink — I've seen a two-refill package for Canon printers for \$25 —

refills also help protect the environment by reducing the number of cartridges you throw away.

If you have a colour inkjet printer with a one-piece cartridge that holds three or four colours, it's especially important to look into refills for both ecological and economic reasons. Normally, you must throw away the cartridge when any one of the colours is exhausted — with refills, you can continue to use the cartridge even after one colour runs out.

The exact techniques used by refill kits vary, but the general idea is the same: you open the cartridge or pierce it with a needle, inject new ink and reseal it. Some brands have special selling points, such as superior ink colours or a plastic needle that may be less likely than a metal one to cause injury. You'll find several refill kits at your local computer discounter.

RAM speed

Q Is it true that a 386DX (or less) would need to exceed 40MHz clock speed before it can take advantage of the extra speed offered by SIMMs (or any other RAM) rated at under 100ns (nanoseconds, billionth of a second)?

It was put to me that anyone buying RAM (eg, SIMMs) faster than 100ns for use on such a machine would be wasting their money, as even a 386DX running under 40MHz only had a top access speed to its memory of 100ns (eg, a 386DX at 33MHz would still address 80ns memory at 100ns because of its in-built limitations).

— Brook Papworth

A Well, yes and no. The price difference isn't that big, and if you buy 80ns memory chips, you can move them over when you buy a faster system; whereas the 100ns memory would force you to introduce wait states and slow down your new system.

Brett Glass

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Expanding Your Horizons

SASS 108C

The best bits of WinWord 6.0 are whoppers

By Brian Livingston

Whenever it looks as if utility developers will be wiped out by the next revision of this or that software, they prove by their ingenuity that there is nothing to worry about.

A good case in point is Microsoft Word for Windows. After a long period of development, Microsoft finally revved Word for Windows 2.0 to Word for Windows 6.0, skipping versions 3, 4 and 5 out of rampant me-tooism (after WordPerfect jumped to 6.0 with the excuse that this would eliminate confusion with the DOS version). A few months later, after some nasty glitches surfaced, Microsoft released Word for Windows 6.0a, a bug-fix version. If you purchased Word for Windows 6.0 you should immediately upgrade to 6.0a by calling Microsoft on (02) 870 2200. You can also upgrade by downloading a large PATCH.EXE file from the MSWORD forum on CompuServe and other bulletin boards.

The funny thing is that although Word for Windows 6.0 is a welcome improvement over 2.0 in many ways, in other ways it falls surprisingly short. For example, Word 6.0 includes support for more template and macro backbones than Word 2.0. But several readers have pointed out that if you install Word 6.0 over Word 2.0, roughly half of your old templates and macros will not be converted properly — rendered unuseable by Word 6.0. This even applies to Microsoft's own templates supplied with Word 2.0. Extensive fine-tuning by hand is required to make these templates and macros work under Word 6.0. A case in point is Jan's macro for inserting a fixed date, which now requires fewer functions, and his AUTOEXEC one which no longer needs to set Word's size and location (6.0 finally remembers its last appearance).

Into this milieu comes Woody's Office Power Pack 6.0 (WOPR, pronounced "whopper"), a set of add-on utilities. The new set replaces WOPR 2.0 and is enhanced and upgraded for Word 6.0. WOPR fills in and compensates for Word for Windows 6.0 features that users of other word processors, such as WordPerfect for Windows, take for granted.

For example, although many people assumed that file management features similar to Word-

Perfect's would be included in Word 6.0, it still has none. You can't even delete a file from within Word 6.0. (You could write a macro that prompted you for a file name and then delete it, but that is hardly the same thing as file management.)

The WOPR 6 File Manager is a nifty dialogue box that allows you to perform all the usual move/copy/delete chores, print files, create directories and much more. Word for Windows 6.0 has an improved envelope feature, but WOPR has a much better utility called Enveloper, which gives you control over many more aspects of envelope design.

Word 2.0 had a fairly easy way to change which command or macro was assigned to a button on the toolbar. This capability has been expanded in Word 6.0 and now includes an editor for the button icon, which even lets you import a clipboard image from a drawing application. WOPR 6 improves on this with a complete Toolbar Editor that lets you create, redraw and assign buttons to any command you like. A particularly useful feature of this is the ability to move an imported image one pixel at a time.

Additional goodies introduced by WOPR include a printing utility for special formats, such as tri-fold, booklet, four by two and greeting cards. WOPR is available as shareware in cut-down form; for the full, registered version, a single copy is \$90 from My Computer Company (phone (02) 565 1991).

I've had a letter from reader David Fox regarding the MaxBPs=768 setting on a notebook running QEMM-386 version 7.03, which raises an error message after Windows fails to start. According to a Quarterdeck engineer, this is because, under QEMM 7.03, Windows loads some data below 64K which reduces the space available for breakpoints. As in the error message, Quarterdeck recommends a setting of MaxBPs=500; when that fails to work, as noted by David, the official answer is to omit the setting altogether. If you are running MS-DOS 6.2, I'd suggest using Microsoft's EMM386.EXE instead — the two memory managers are much of a muchness as regards performance, and the Microsoft one lets you solve the MaxBPs problem. ■





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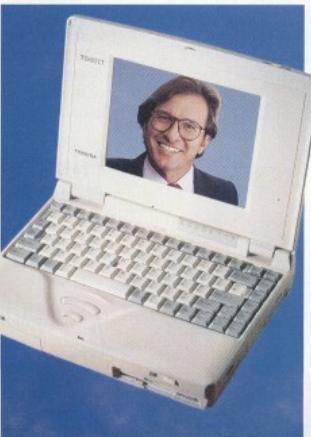
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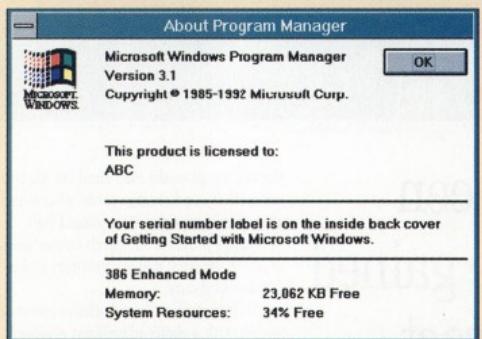


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Expanding Your Horizons

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What's it all about?



Q Can you tell me what the About option in Program Manager's Help menu is all about? I've asked a number of people in the industry who are all very knowledgeable, but not one could give me the answer. The About option shows Free Memory and Free System Resources, but the numbers don't seem to have anything to do with the RAM of my computer. And does the per cent Free System Resources refer to the same Free Memory?

You are providing a great service to the industry and I trust that you will be doing it for years to come.

- Don Goss

A Gosh, that flattery feels good — but don't tell me, tell your mates. As for About, that's an easy one. The Free Memory indication is the sum of available real RAM and virtual memory — that is, the permanent swap file on your hard disk. As such, it can be deceptive: if you have 4Mb of RAM and a 4Mb swap file, Free Memory can read 2Mb when actually all you have available is no RAM and 2Mb of swap file. For a more practical indication, just watch your drive light: if the hard drive is running almost constantly while you're working within an application and Windows is running like a centipede in treacle, you badly need more RAM chips. If the hard drive only runs briefly when you change focus from one loaded application to another, you're OK.

The Free System Resources indication relates to two special, small areas in memory, set aside to keep track of such things as open windows. It's perfectly possible to get "Not Enough Memory" error messages while you have (say) 10Mb of real RAM vacant — this happens if you run several small and badly-designed applications with lots of windows, sub-windows and buttons. You'll find it instructive to load in several applications and take a reading from About after each is loaded (the reading is refreshed only when you open the About window, not if you leave it open).

File Manager à la carte

Q I know that you can modify the Tools menu that DOS 6.0 adds to File Manager, but can you tell me how to add a custom menu?

- Bill Terry

A You can create a limited custom File Manager menu by copying and modifying another menu's Dynamic Link Library (DLL) file. A simpler solution

is to pick up a utility that includes a powerful macro language, such as File Commander from Wilson WindowWare (ask major shareware distributors).

However, if you're willing to roll up your sleeves and modify a DLL file, then read on. Because you own DOS 6.0, the obvious candidate is MTOOLS.DLL: this file adds the Tools menu to File Manager.

Before you dig in, though, ponder these rules which are dictated by the fact that you can't change the size of your copy of MTOOLS.DLL.

- 1) You can add only two programs to your custom menu.
- 2) The executable files (EXE) of the two programs must be in the same directory as the DLL (move them if necessary).
- 3) The executable file names must be exactly the same length (not counting the extensions) as those of the programs originally referenced in MTOOLS.DLL. Since you're replacing references to MWBACKUP.EXE (the DOS 6.x backup program) and MWAV.EXE (the DOS 6.x anti-virus program), the file names must be eight and four characters, respectively. If the EXE file names aren't the proper length, rename them now.
- 4) The custom menu name must be exactly five characters (to match Tools), and the menu options must be exactly nine and 12 characters, respectively. The names can be shorter if you fill them out with spaces or punctuation.

Just to make things interesting, the DLL contains error messages, too. So if one of your custom files fails to work for some reason, you'll get a totally irrelevant error message, unless you're brave enough to locate and change those.

Now, you're ready to act. Since you're keeping the Tools menu, first copy MTOOLS.DLL to another directory and rename the copy. Remember, the DLL should reside in the same directory as the two programs your custom menu will reference.

Next, launch Windows Write and open your custom DLL file. When prompted, select *No Conversion*. When the DLL is loaded into the editor, select *Find-Replace*. To supplant the command that launches the DOS 6.0 anti-virus program, type **MWAV.EXE** in the Find What text box and the four-letter name of your new executable file (such as CALC.EXE) in the Replace With text box. Then select *Replace All*.

With the Replace dialogue box still open, type **MWBACKUP.EXE** for Find What and the eight-letter name of your other new program (such as CARDFILE.EXE) for Replace With, and select *Replace All*. Bear in mind that this technique is not limited to Windows programs — you can also reference DOS applications, batch files and PIFs.

Next, you need to customise the options listed on the new menu. Type **&Antivirus...** in the Find What text box, enter its replacement menu name (12 characters plus an ampersand), such as **&Calculator!!**, in the Replace With text box, and click *Replace All*.

The ampersand indicates that the following character will be underlined in the menu for keyboard access. Make sure you don't assign the same letter to the two menu options.

Now type **&Backup...** in the Find What text box and a nine-character (plus ampersand) replacement in the Replace With text box: for example, **Ca&rd file** (the space counts as a character). Click *Replace All*, and leave the Replace dialogue box open.

To give the custom menu a name, type **Too&ls** in the Find What text box and a five-character (plus ampersand) name in the Replace With text box, such as **&Stuff**. Click *Replace All*, then select *Close* to exit the dialogue box. Save the file and exit Write.

Finally, you must tell File Manager there's a new DLL in town. From File Manager or Program ▶

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Manager, select *File-Run*, type **WINFILE.INI**, and press **<Enter>**. Locate the [AddOns] section and add a line that points to your new DLL.

For example, type **My Brand New DLL=C:\WINDOWS\CUSTOM.DLL** (it doesn't matter what you type to the left of the equal sign). Save and exit. Incidentally, this is where you find out if there's another DLL that has more menu options already hooked up.

You're done. Just start File Manager (or restart it if it's already running), and your new Stuff menu will appear. The only thing you can't change on this menu is the *DoubleSpace Info* option, since this choice doesn't launch a program.

If launching only two programs doesn't satisfy you, simply repeat the entire process to create still another custom menu. Just keep in mind that you're limited by File Manager, which recognises only the first five lines in the [AddOns] section of the WINFILE.INI file.

If this technique doesn't work — for example, if File Manager stalls, Windows spits out an "Application Error", or the new menu doesn't appear — that means you probably entered an extra space or character inadvertently when replacing references in the DLL.

Step out to DOS and compare MSTOOLS.DLL and CUSTOM.DLL. If they're different sizes, start this tip from the beginning and be especially careful. Happy launchings.

Format without File Manager

Q I hate running File Manager just to format a floppy disk. Can I create an icon in Program Manager that accomplishes the same thing?

— Gregory McComsey

A It's easy as pie, if you don't mind using DOS commands and creating an icon for each floppy drive. To start, open the desired group window in Program Manager, choose *File-New-Program Item*, and click *OK*. Give the icon a title in the *Description* box, such as **Format Floppy A:**, and in the Command Line box, type **COMMAND.COM /C FORMAT A:**. You must specify a floppy drive on this line; you can also add other parameters at the end, such as **/s** for creating bootable floppies and **/q** for quick formats if you use DOS 5.0 or later. You can also assign a shortcut key or select a different icon. Click *OK*, and the floppy formatting icon appears.

When you double-click the icon, a DOS screen will pop up prompting you to insert a floppy disk to format. Just follow the instructions on screen. If you want to format floppies in another drive, use the steps described above to create a second icon for the task.

DOS windows your way

Q I like how Windows remembers the last window size and position of each DOS program. But other people are now using my PC and they keep rearranging things. How can I keep DOS windows where I want them?

— Ross Beckett

A To set your DOS application windows in digital concrete, size and arrange them as desired, then exit the programs. Restart each DOS program and press **<Alt>+<Space>** to open the control menu, then select *Fonts*, deselect the *Save Settings on Exit* option and click *OK*. Next, open SYSTEM.INI, find the [NonWindowsApp] section and add the line **DisablePositionSave=1**. Save the file and restart Windows.

Now, no matter how your DOS application windows are manipulated, they'll snap back into place the next time you load them. If you later decide to change the size or placement of a DOS window, load the program, make the changes, choose *Fonts* from the window's control menu, check the *Save Settings on Exit* option and exit the program.

Then restart the program and deselect *Save Settings on Exit* so that the new configuration can't be altered.

Corporate wallpaper

Q I've created a custom company logo pattern on my home computer (via the Desktop section of Control Panel), but I'm having a hard time reproducing it on my office PC. Is there some secret pattern file on my home PC that I must copy to the office PC?

— Teresa Wu

A More or less. When you create a custom pattern and add it to the "PatternName:" list box in the Desktop dialogue box, a reference is added to the [Patterns] section of CONTROL.INI, which is found in the \WINDOWS subdirectory. For example, if you took the supplied Diamonds pattern, edited it, and added the new pattern to the list as "Logo", you'd find a line like "Logo=0 255 0 255 0 255 0 255" added to the bottom of the section.

To copy this custom pattern to any other system, simply copy the appropriate line from your home PC's CONTROL.INI to a text file, and, on the office PC, paste it into the [Patterns] section of CONTROL.INI. To make the pattern current, open Control Panel, select *Desktop*, click the *Pattern: Name* list, choose the custom pattern and click *OK*. Your personalised logo will now be installed.

Scott Dunn

Keeping tabs with cross-tabbed dBase

Q We have a dBase IV employee data file that has character-type fields for Location and Group, as well as for Name, Social Security number and so on. An employee can be assigned to one of five locations (1 to 5) and one of 25 groups (01 to 25). I'm trying to design a report that shows people per location per group. It must be organised into six columns: one for the group and one for each location, with each row listing the name of one user in the column for that location. I can't figure out how to do this.

— Ronald Christian

A What you've got is a cross-tab report, something the dBase report writer doesn't support. Short of buying a separate report writer program, your best bet is to transfer the data to a temporary file that has a column for each location, then print your report from this file.

First, create a data file called EMPLRPT that includes the fields Group, Location1, Location2, Location3, Location4 and Location5. Define Group just as it is in the original file, and make all the Location fields as long as the Name field of the original file.

Then design your report using this new — and still empty — data file. The report will be a simple, columnar report with one row of fields.

One more thing: the original data file needs to be indexed on the Group field. As long as the numbers in the Group field have leading zeroes, as you indicated, this index will put them in the correct order.

Finally, copy the commands shown in *Figure 1* to an ASCII text file called EMPLRPT.PRG. In writing this program, I've assumed that your original file is named EMPLOYEE; your group index is Group; the only fields you want to print are Group, Name and Location; and both your temporary file and the report are named EMPLRPT. You may want to change these names when you re-create the program.

Also, if you want to add other fields to your report, you'll have to alter the report design and the program to accommodate them.

Once you've set up your files and the program, simply enter DO EMPLRPT at the dot prompt to print your report.

```

close all
select 1
use employee order tag group
select 2
use exclusive emplrpt
zap
select 1
do while .not. eof()
  grp = group
  loc = location
  nm = name
  select 2
  if group <> grp
    append blank
  endif
  rec = recno()
  fld = "location" + loc
  do while &fld <> space(10)
    skip
    if eof()
      append blank
    endif
    enddo
    replace group with grp, &fld with nm
    if recno() <> rec
      goto rec
    endif
    select 1
    skip
  enddo
  select 2
  report form emplrpt to printer

```

Figure 1: Print your cross-tab reports after preparing them with this dBase program

dBase structure in a few seconds

Q I use dBase III Plus to manage several projects, each of which includes multiple data files. I often find myself confused about which data is in which file. How can I print the structures of these files for quick reference?

— Pam Clark ▶

A It's easy. At the dot prompt, with a data file open, enter LIST STRUCTURE TO PRINTER. If you have a laser printer, you may want to follow this with EJECT.

ASCII moves in with dBase IV

Is there any way to import ASCII files using dBase IV menus?

— Perry Smith

A You can't import ASCII records into a new data file, but you can append them to an existing one.

First, select the data file in question, then choose *Modify structure/order—Append—Copy records from non-dBase file*. Depending on how the fields in your text files are separated, select *Text fixed-length fields*, *Blank delimited*, or *Character delimited*. Note that in all three cases, dBase expects your ASCII file to have a TXT extension.

Copying Paradox pictures

Q I often use picture validity checks in Paradox for DOS. Can I copy a picture from one field to another, either in the same or a different table? It would save me a lot of time.

— Chris Utter

A While viewing the table with the picture you want to copy, press **<F9>** to go into edit mode and select *ValCheck—Define*. Choose the field you want to copy from, and select *Picture* to display the picture expression. Then press **<Alt>+<F10>** to bring up the PAL menu, select *MiniScript* and enter **x = menuchoice()**. This command saves the picture to a variable called **x**. Press **<Esc>** a few times to back out of the menus.

To copy the picture to another field, follow the steps to add a new picture to a field. When Paradox prompts you to enter a picture, press **<Alt>+<F10>**, choose *MiniScript*, and enter **x** at the prompt. When you press **<Enter>**, you'll see the picture appear. Just press **<Enter>** again to add it to the field.

Integers only in Paradox for Windows

Q I can't change the default display of Paradox for Windows to show numbers as integers in a table. Paradox always shows numbers with two decimal places, and I have to change the formatting for each field to get it to do otherwise. Can you help?

— Rachel Nash

A Paradox for Windows takes its default number format from your Windows settings. To make all new numbers show as integers, launch the Windows Control Panel. Next, double-click *International* and click the *Number Format Change* button. Change the value in the *Decimal Digits* box to 0.

Spell checking Access data

Q I'm using Access to set up an inventory system for a market, and I'd like to spell-check a report before printing it. I tried to export the report to Word 2.0 for Windows, but I lost all the formatting. What can I do?

— Terry Coleman

A You can't spell-check in Access or import your report layout into WinWord, but you can export an Access table or query into WinWord, bring it back and print your report from that. You'll have to do the exporting and importing on the Access side because WinWord can't read your Access data directly. (Word 6.0 for Windows can do a mail merge with Access data, but that wouldn't help in your situation.) It doesn't take long, so it might be worth the trouble if you really want your records spick-and-span.

First, highlight the name of the table or query you want to check in the Access Database window. Select *File—Export—Text (Delimited)* and the name of your table or query. In the Export to File dialogue box, you can change the name of the text file that Access creates, or just click OK. In the next dialogue box, select *Options*, select the *Text Delimiter (none)* and the *Field Separator (tab)*, then click OK to make the conversion.

Now go to WinWord, load the TXT file Access has just created and check its spelling. If you correct any errors, save and close the file with the *Text Only (.TXT)* option.

Now you can go back into Access and import the revised file. Assuming you want to put the records back into your original table, make a copy of your database (just in case), then delete all the records in the table by opening the database and the table and selecting *Edit—Select All Records—Edit—Delete*.

Back in the Database window, highlight the name of the newly emptied table and select *File—Import—Text (Delimited)* and the name of your newly corrected text file. Click Import to open the Import Text Options dialogue box. Click *Append to Existing Table* and select your newly emptied table. Again click *Options*, set the *Text Delimiter to (none)* and the *Field Delimiter to (tab)*. Click OK and Access will copy the information back into the inventory file.

Celeste Robinson

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Souping up the sixes

Q I just upgraded to version 6.0 of Word for Windows, and I have to say I'm disappointed with its performance. It seems quite sluggish on my 33MHz 386DX computer, even with 4Mb of RAM, plenty of hard disk space and a Diamond SpeedStar video adaptor. Can you suggest any ways to improve performance, short of buying an entirely new system?

- Alan Johnson

A Sure thing. While I can't guarantee you'll ever get a blazing speed from WinWord on your 386, you can improve performance. (Incidentally, the speedup advice here also applies to users of WordPerfect 6.0 for Windows.)

1. Add more memory; this is where you'll get the biggest improvement. While these programs will run in 4Mb of RAM, they really need at least 8Mb to stretch their legs. Also, make sure all of your memory is available to Windows by setting your memory management software to get rid of all expanded memory and use extended memory only.

2. Today's word processors make heavy use of Windows graphics functions, so a graphics accelerator like yours is the way to go. Conventional wisdom has it that you get the best speed with simple 16-colour standard VGA (640 by 480), but with a Windows accelerator card, the hardware and driver software are usually optimised so as to make the high-resolution, high-colour video modes run faster still. If you really want the last bit of speed, test all available modes and pick the fastest, using something like WinTach or Torque.

3. If you're short on memory and your system is using swap files, set up a permanent swap file for Windows on your hard disk — it's slightly faster than temporary ones. Launch the Control Panel, double-click the 386 Enhanced icon, click *Virtual Memory-Change*, and set up your swap file. (With 8Mb of RAM, I recommend an 8Mb swap file.) If you have 16Mb of RAM, set the swap file to None; this forces Windows to work in RAM only, which is fastest of all.

4. Make sure you have at least 4Mb to 6Mb of free space on the drive where Windows stores temporary files. Find the line in your AUTOEXEC.BAT file that reads SET TEMP=drive\path. Make sure TMP files aren't being sent to a drive compressed with DoubleSpace or any other disk compression utility. Unless, that is, you have a slow, elderly disk drive, in which case compressed drives will be faster than uncompressed ones.

5. Whenever possible, work in your program's fastest display mode. In WinWord, that means selecting *View-Normal*; WordPerfect users should select *View-Draft*. Switch to page-layout views only for final formatting.

6. If your document includes graphics or charts, don't display them while editing text. In WinWord, select *Tools-Options-View*. Select the *Picture Place holders* check box and click OK. WordPerfect users can accomplish the same thing by selecting *File-Preferences* and double-clicking the *Display* icon. In the Display Preferences dialogue box, uncheck the *Graphics* check box in the Show frame, then click OK and Close.

7. If you work with documents longer than about 50 pages, break them down into smaller chunks, then use your program's Master Document feature to bring them together for final formatting and printing.

8. Finally, whenever possible, run your word processor as the only active Windows application. Applications and utilities (including clock programs, screen savers and schedulers) steal time, memory and Windows resources away from your main task.

Customising WinWord 2.0 envelope fonts

Q I frequently print envelopes with Word 2.0 for Windows' *Create Envelope* tool, but I don't like the default font that it uses for the addresses. I haven't figured out how to change these fonts to new defaults. What's the answer?

- Alicia Bogard

A This question sent me deep into WinWord's help system, but I found the answer for you. The fonts used on envelopes are stored in styles, but it's not all that easy to display those styles so that you can change them. Here's how to do the job and make the new font choices the default.

Start with a blank document. Select *Tools-Create Envelope*, then click the *Add to Document* button. WinWord will attach an envelope to your blank document, positioning the cursor in the return address. Now select *Format-Style*, choose the *envelope return* style from the Style Name list, then select *Define* to drop down the rest of the Style dialogue box. There, select the resulting button and make ▶

your font changes in the Character dialogue box, clicking *OK* when you're done. Back in the Style dialogue box, turn on the *Add to Template* check box, then select *Apply*. Answer *Yes* in the dialogue box that asks if you want to redefine the existing style.

To change the style for the envelope's main address, select *Format-Style*, choose *envelope address* in the Style Name list and then define the new address font by repeating the remaining steps from the preceding paragraph. You don't have to save this blank document when you exit WinWord, but be sure to answer *Yes* when prompted to save global glossary changes.

Your new envelope fonts will become the defaults. By the way, you won't have to use the *Tools-CREATE ENVELOPE* command the next time you want to change these fonts, since the steps above added the two envelope styles to your Normal template. Instead, just start with the *Format-Style* step.

Vanishing characters in WordPerfect 6.0 for DOS

Q I recently upgraded from WordPerfect 5.1 for DOS to version 6.0. Unfortunately, ever since I upgraded I've had problems printing on my Texas Instruments microLaser Plus printer. What happens is that some letters don't print when I'm using large fonts. I'm using the HP LaserJet IID driver supplied by WordPerfect. Do you have any suggestions?

— Jack DeLap

A What you have here is a failure to communicate. WordPerfect is sending large characters to your printer as soft fonts, but your printer doesn't completely understand what WordPerfect is trying to tell it.

The first thing you should try, therefore, is to lower the threshold point size — the point size above which WordPerfect sends fonts as bitmaps rather than soft fonts. To do so, press **<Shift>+<F7>**, then **<Shift>+<F1>** to get to the printer setup screen. Lower the threshold to whatever point size you're trying to print, and send the document through. If it still doesn't print correctly, try reducing the threshold point size by another 10 per cent.

Easing the switch from WordStar 7.0 to WordPerfect 5.1

Q I'm a 60-words-per-minute touch typist who uses WordStar 7.0 for DOS. I am happy with the program but I'm concerned about its future. I'm thinking of switching to WordPerfect 5.1 for DOS,

but when I tried it out, my typing speed slowed way down because I couldn't use those familiar WordStar shortcut keystroke commands. Is there any way to duplicate those WordStar commands in WordPerfect and keep my typing speed up?

— John Menkes

A Moving to WordPerfect 5.1 makes a lot of sense, because of the company's outstanding customer service and the product's superior handling of fonts, graphics and printing. Luckily for you, WordPerfect also has a customisable keyboard layout, which makes it possible to use most WordStar commands.

Customising the keyboard yourself could take quite a bit of work, but fortunately, user Sid Kingdon has already done the job for you. He makes a keyboard file and associated macros, which are available at no charge. Available as WSKEYS.ZIP on PC World Online, these files implement the 60 most common WordStar commands, including the famous **<Ctrl>+key** cursor controls. The system is easy to install and a complete documentation file is included in the WSKEYS.ZIP archive. It should make you feel right at home in WordPerfect.

Swinging from column to column in Ami Pro

Q I just bought Ami Pro 3.01 and am using it to create a three-column newsletter. Everything works fine, except that I can't figure out how to flow text from the first column to the second, or from the second to the third, without repeatedly pressing **<Enter>**. Is there an easier way to move from column to column?

— Jay Masunaga

A You need a break — a column break, to be specific. To insert one, start by selecting *Page-Breaks*. In the Breaks dialogue box, select the *Insert column break* option and click *OK*. If there's no text beyond the cursor position when you insert the break, you'll have to press **<Enter>** once before you can start entering text in the next column. To see where you've placed column breaks, select *View-View Preferences*, then select the *Marks* check box and click *OK*. Ami Pro will display an icon in the columns where you've placed a column break.

Another way to handle text in multiple columns is to use Ami Pro's balanced-column feature. With balanced columns turned on, the program automatically breaks the text as you type so that an equal amount appears in each column. To turn on balanced columns, select *Page-Modify Page Layout*, choose the number of columns and the gutter-width measurements you need, then select the *Column balance* check box and click *OK*.

George Campbell

When is a 486 not a 486?

QI'm looking for a new system and I can't keep track of all the 486s — SLC2, DX, SX, DLC and so on. What are the differences among all these various chips?

— Matt Goff

AWhat you really want to know is how one chip performs relative to another. Unfortunately, you can't really compare chips head-to-head because each one demands a slightly different system design, and that factor affects speed. So I've put together a performance table (*Figure 1*) that lists the average speeds of 486 systems (and for comparison purposes, a few 386 systems) based on tests run by the PC

How the chips fall

Chip	Performance
Intel Pentium-60 ¹	229
Intel 486DX2-66 ¹	148
Intel 486 OverDrive-33/66 ^{1, 2}	145
IBM 486BL-66	139
IBM 486SLC2-66	127
Intel 486DX-50 ¹	118
Cyrix 486S-40	108
Intel 486DX2-50 ¹	108
Intel 486 OverDrive-25/50 ^{1, 2}	106
Intel 486DX-33 ¹	104
Intel 486SX-33	103
Intel 486DX2-40 ¹	93
Intel 486 OverDrive-20/40 ^{1, 2}	91
IBM 486SLC2-50	89
Intel 486DX-25 ¹	81
AMD 386DXL-40	80
Cyrix 486DLC-33	80
IBM 486SLC2-40	80
Intel 486SX-25	80
Intel 486SX-20	60
Intel 386DX-33	59
Cyrix 486SLC-25	50

¹ Chip includes built-in maths co-processor

² Chip available as upgrade only

Figure 1: These performance numbers are based on BAPCo SYSmark, a test suite that runs tasks in 10 DOS and Windows applications. The numbers indicate how many times the task set repeats per hour; they should give you a good idea of the performance you can expect. In addition, the first 90MHz Pentium chips are coming into the market now.

World Test Centre. Disk activity plays a major role in these tests, so they'll give you a reasonable idea of how one type of 486 PC is likely to perform relative to another in real life.

As you can see, all chips with the name 486 do not smell as sweet. Cyrix's 486SLC-25 reeks, for example, falling behind even Intel's 386DX-33. I strongly suggest you avoid PCs with processors less powerful than Intel's 486SX-25, even if you're buying a home PC — there is no longer any great price difference between a 386 and a 486.

A word about the OverDrive scores in the table: PCs don't come with OverDrive chips already installed. These chips are upgrade versions of 486DX2s. If you plug a 486 OverDrive-25/50 into a 486SX-25 system, for example, performance will increase 30 to 70 per cent — close to the power of a 486DX2-50. At one time, only Intel SX and DX systems accepted OverDrive chips, but an increasing number of non-Intel systems now come with sockets for OverDrives.

One more point: had our testing placed greater emphasis on financial or statistical functions, or had it included CAD tests, the systems whose chips contained maths co-processors would have risen in the rankings. If you crunch numbers or design buildings and your current chip doesn't already include a maths co-processor, make sure you add maths co-processing to your system. The best way to do this is to add an OverDrive processor (if your system will accept one), since you get both number crunching and a healthy performance boost in one chip.

Upgrade to nowhere

QI have a hardware upgrade question. I have a 386DX-40 system which includes an MG Product MG-38606-40 system main board, with a 40MHz AMD 80386DX CPU, a UMC82C480 chip-set and 128K of secondary cache memory. The system main board includes a PGA socket for an 80387 maths co-processor. I recently upgraded the base system to include an additional 4Mb of RAM (taking the total to 8Mb) and an Actix GraphicsENGINE 32+ 1Mb graphics accelerator card (in place of the original Trident TVGA 9000 VGA board).

What I would like to know is, is this system

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chip upgradable to 486DXC specifications? I read elsewhere recently that the Cyrix Cx486DLC chip fits into a 386DX socket. Is this correct, and if so, is this an appropriate upgrade path to consider? Is this Cyrix chip a true 486 chip, or is it little more than a glorified 386 chip? Are there any other chip upgrade options which do not involve changing the system main board?

I am basically happy with the system I am now running, but if there is a means of upgrading the CPU that involves essentially nothing more than replacing the existing 386DX chip with an upgraded chip, then that is what I would like to know about. Is this sort of processor upgrade something I could do myself — that is, is it simply a matter of taking out the existing 386DX chip and slotting in the new upgraded chip (whatever it might be) — or should it be done by a professional? And there is, of course, the related question of where does one buy the upgrade chip of one's choice, especially in the ACT?

— Don Sephton

A Have a look at *Figure 1*, which relates to the preceding question: the answer is "don't bother". There is no performance difference, the job costs money and you're taking a risk — namely the risk that the compatibility won't be perfect and you'll have problems with some unusual software combinations the chip manufacturers never tested. Merely to add 50 per cent to your speed — which in reality means that a pure processing task that takes 10 seconds is cut to 6.7 seconds — you have to go right up to an IBM 486SLC chip, which certainly won't plug into your existing motherboard.

A lot depends on what work you are doing, anyway. The processing speed is always masked by disk access and the like, and if the video card is doing most of the work as in Windows word processing, the gain from upgrading the CPU may be too small to notice. You've already improved the two most "gainful" areas — graphics and memory — and I'd strongly advise you to soldier on, since you're basically happy with the system. Who knows, by the time your machine is too old to use, you might get a used Pentium system for \$1,000...

Biased BIOS?

Q I've recently replaced the disk drive in my Osborne 386DX with a Connor 540Mb drive. I realise that DOS doesn't support a disk drive over about 502Mb, so I thought I'd partition the drive into two drives of 270Mb. The problem I have is that in the CMOS settings, I am unable to define the drive any bigger than 503Mb. I would have thought I could define a bigger physical drive than DOS supports. I am of the opinion that maybe my

BIOS is outdated: I've got a Phoenix ROM BIOS PLUS v1.10M1 and on the System Configuration Setup screen, it reports that the version of the setup program is v.02.01. If it is a case that I need an updated BIOS, where can I buy one?

— Stephen Mednick

A Boning this out on the phone, it turned out that what happens is that when Stephen entered the stated values for cylinders, heads and so on in the *Other* option of his setup program, it showed the resulting size as 503Mb. What this means is that Connor has stated its disk size as "unformatted", whereas the setup program shows the "formatted" or actual useable space. The good news is that there's no need to upgrade the BIOS; the bad news is that this sort of deceptive advertising still goes on. Incidentally, the maximum partition size in MS-DOS 6.x is two gigabytes, so you won't have any worries on that score, either.

To upgrade or not

Q I work for a small non-profit agency that can't afford to replace its ageing 16MHz 386SX PCs. The systems have only 2Mb of RAM and we're using Windows — obviously we need to add RAM. But with our limited funds, would it be better to add 4Mb of RAM to each PC or to add 2Mb and a CPU upgrade? Or should we not upgrade at all and wait for prices on 486 systems to drop, since future products will make the upgraded systems obsolete anyway?

— John Galgano

A Because you don't have money for new PCs, make sure your 386SXs have at least 4Mb — it's the single biggest boost you can give to Windows performance. Do your PCs use standard SIMMs? If so, buy 80ns SIMMs, even though your systems probably call for 120ns or 100ns SIMMs. The 80ns SIMMs should cost the same (or only slightly more), and you have a greater chance of being able to transplant them into any new 486 system you eventually buy.

On the question of adding 4Mb versus adding 2Mb plus an accelerator board, however, this isn't really a problem. Since the office has such low-powered machines, I imagine most of your people are using just a couple of applications at a time, which means adding more than 2Mb (to go beyond 4Mb total system RAM) probably won't speed things up much, unless you're doing a lot of graphics. Upgrading the CPU tends to be an expensive option and not worthwhile unless you run calculation-heavy programs. In general Windows-work, a better graphics card will usually give you more bang for the bucks.

Eric Knorr

First Lite

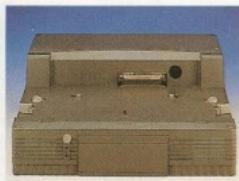
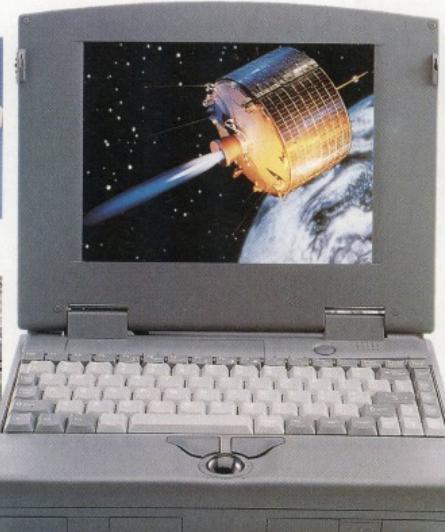
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The black art of modems

In the Banksia fax modem review in the June issue of *PC World* (page 96), Neale Morison reported only a single problem with the 124FAX-I modem, in that he could not get it to send to the in-house fax.

The cause was said to be a Telecom problem with the local exchange line being of poor quality, combined with the 124FAX-I's transmit level default setting being 7dB below the Austel-approved maximum.

Morison reported that Banksia fitted an Eprom to raise the transmission level by 5dB, and this would fix the wider problem of not communicating at all but failed to allow faxing to the in-house machine.

Actually, the problem could be in the protocol negotiation stage, which takes place at 300bit/sec; the modem training stage where the two modems find out if they can talk at 9,600, 7,200 or 4,800bit/sec; or at the image transfer stage at the negotiated speed. Testing using FOLDS B as well as FOLDS A would have given a much clearer picture as to where the real fault was located.

The transmit level of the 124FAX-I was -17dBm, leaving a 6dB line loss to produce a transmission level at the local exchange of -23dB (4dB below the -19dB recommended by Telecom). Adding another 6dB to get back to the local fax machine would mean that the receive level would be about -29dB.

Therefore, to produce acceptable 9,600bit/sec performance the noise level introduced by the telephone line would have to be about -28dB, producing a signal-to-noise ratio of around -57dB, at which satisfactory performance would be reasonably expected.

However, if the signal level was the problem the modems should have negotiated a lower speed — 7,200 or 4,800bit/sec — at which the line should have been handled with ease.

The problem doesn't have to be in the transmitting 124FAX-I fax modem; however, as the line appears acceptable and the receiving machine wasn't mentioned as presenting problems in daily use, the conclusion appears to be that the 124FAX-I had marginal performance at 9,600bit/sec and failed to negotiate a lower speed.

It's the receive section of the modem that is by far the most sensitive to Telecom line impairments, and is the one that determines at what level the modem will fall back from 9,600bit/sec to

7,200bit/sec. With BIZTel's V42 fax modem, for example, that level is determined by the ratio of signal to noise and is about -19dB.

Life is pretty tough in the modem business, and chip sets from Sierra Semiconductor are no longer available, among others. The chip set used in BIZTel's V42 fax modem is from a major vendor who has promised to support the product for at least three years.

Oh yes — if your modem has user-configurable transmit levels, changing these could invalidate the Austel approval and may introduce other problems such as dial tone distortion, leading to wrong numbers.

- Bob Singleton

Editor's comment: *Bob Singleton is the modem designer at BIZTel and the nearest thing to a comms guru I know — as you may have guessed from this letter.*

Room for women on-line?

Q I'm curious about on-line services, but I've heard they can be inhospitable to women. Is that true?

- Barbara Stuart

A *Au contraire!* I've been prowling on-line services and BBSs for 10 years now, and I can tell you without hesitation that you have nothing to fear. Sure, harassment must exist but in all these years I've never received an offensive message.

What I have received is treatment I can only describe as chivalrous. As one on-line joke puts it, if you want technical advice, log on as a woman. A few years back some fellow businesswomen and I bought an account on a major on-line service under a male pseudonym. What did we find? We received less e-mail. When we requested technical advice, we got fewer replies.

Frankly, signing-on as men was boring; as women, we'd grown accustomed to a kinder on-line world. We let that "male" account expire within a month . . .

Judy Heim

Maximum security

I read with some interest, as well as dismay, your reply to John Huber (May issue, page 192) about protecting software with security systems. The system of putting away the keyboard is quite unnecessary if you have our Easy Menu Security System. At this point, you are going to say, "Not another one!". Yes, but with a vast difference — this one is unbeatable.

The system has had its most thorough testing on a library public enquiry terminal. The system cannot be rebooted from the keyboard. The print screen is disabled. Clients cannot access any program other than the ones chosen by the library. This system includes not being able to shell out of programs such as WordPerfect to bypass the security. You cannot edit CONFIG.SYS or any other vital text file. Floppy drives can be disabled for booting while still allowing other access.

No, we cannot intercept BIOS keys, but with this system users never get that far. The only way around this system is with either the reset button or the power switch. Frankly, if the users are that determined on sabotage, I would suggest disabling both the computer panel and having a remote power switch.

We would be happy to give more information about this system to anyone who is interested. It has had probably the greatest acid test of all — it is currently installed in two high schools and a prison.

— Geoff Prudames

Editor's comment: We don't normally give free plugs for unknown products, but this is a genuine case of responding to a question. Geoff Prudames runs Sleep Easy Software of Townsville, phone (077) 89 1672.

Rescue your rescuers

We have a 386-33 system on which, over a period of two years, we've installed DOS 5.0, the Norton Utilities, PC Tools, a Colorado Memory Systems internal tape drive and finally DOS 6.0. Each time we installed one of these products, it suggested (and created) a "rescue" disk, to be used to boot the computer in the event of a hard disk problem.

Recently, we had a catastrophic disk crash that prevented the machine from booting from the hard

disk. When we used the rescue disks to boot the machine, we encountered a problem we never anticipated: we kept getting messages saying we were running the wrong version of DOS! The AUTOEXEC.BAT and CONFIG.SYS files, which had been created with DOS 6.0, wouldn't work with a rescue disk containing DOS 5.0.

We quickly learned our lesson: when you upgrade to a new operating system, it's vitally important to re-create your rescue disks — your life-line when disaster strikes — with your new operating system and configuration files. Otherwise, they may be useless when you need them the most.

— Arnold Margolis

Editor's note: Now that Microsoft has launched DOS 6.2 (which fixes many bugs and problems in DOS 6.0), the troubles Arnold experienced are likely to become common. Remember that using DOS's SYS command to upgrade the operating system image on a rescue disk may not be enough; it's better to re-create each disk from scratch after your DOS upgrade. Each of the three commercial applications Arnold mentions offers a command for re-creating a rescue disk after installation.

Unlike those programs, DOS doesn't create a rescue disk; instead, it prompts you to create an "uninstall" disk. By booting the system with the uninstall disk, you can switch your machine back to the previous installed version of DOS. If all you need is a bootable floppy containing a specific version of DOS, the uninstall disk is adequate. But if you need a bootable disk with all the utilities required to restore the system to order, it won't do the job. To create such a disk, run DOS's SETUP program with the /F parameter, then use it as the base to create a rescue disk with your disk management program. If you are using a disk compressor, you also have to copy the drivers for that over to the floppy, including the CONFIG.SYS and AUTOEXEC.BAT details, otherwise you won't be able to access compressed files on your hard disk after booting from the rescue floppy.

A different Window for every day

I read with interest your Help Screen tip (June issue, page 180) to change the standard Microsoft Windows start-up logo to a customised graphic. There is an easier way to do this. After creating the ▶

THE HELP SCREEN

STAR-DOT-STAR

```
[Menu]
MenuColor=15,1
MenuItem=Normal
MenuDefault=Normal,30
Submenu=Games
Submenu=Applications
[Games]
Submenu=WarGames,War Games
Submenu=Kids,Kid's Games
Submenu=Menu,Return to Main Menu
[WarGames]
MenuItem=Shootem,Shoot 'em up
Submenu=Games,Previous Menu
Submenu=Menu,Return to Main Menu
[Kids]
MenuItem=Barney
Submenu=Games,Previous Menu
Submenu=Menu,Return to Main Menu
[Applications]
MenuItem=WP,Wordprocessor
Submenu=Menu,Return to Main Menu
[Normal]
REM Normal commands here
[Shootem]
REM "Shoot 'em up" commands here
[Barney]
REM "Barney" commands here
[WP]
REM WP commands here
[Common]
REM Common commands here
```

Figure 1: Navigate up and down MS-DOS start-up menus by adapting this sample CONFIG.SYS file to your needs

new RLE graphic, first copy or move it to the \WIN-DOWS\SYSTEM directory, then enter the following command at the DOS prompt while logged on to that directory:

```
COPY/B WIN.CNF + VGALOGO.LGO + <new logo file>
C:\WINDOWS\WIN2.COM
```

This will create a new program called WIN2.COM. If you start Windows by typing WIN2, rather than WIN, you will see the new logo rather than Microsoft's.

There are a few things to watch out for with either method. The resulting COM file can not exceed 64K or it will not run; if the RLE file is not 640 by 480 pixels, it will appear incorrectly placed; and if you are using an EGA card, replace the VGALOGO.LGO file with EGALOGO.LGO and reduce the image size accordingly.

On my system I have several WINn.COM programs, and run a BAT file to fire-up Windows, alternating the WINn.COM executed to provide a bit more variation.

- RW Hampton

Editor's comment: Now there's a clever way to have more fun with Windows. Just one additional caution: do make sure that you make a backup copy of WIN.COM in another directory, in case of trouble. Reader Barry Litchfield has also written in with essentially the same solution.

Parenthood

One of the best new features of DOS 6.x is its ability to define start-up menus that allow you to choose configurations for different tasks. However, in all of the CONFIG.SYS files I've seen (and all of the examples in Microsoft's documentation), there's no way to change your mind and return to an earlier menu once you descend into a submenu.

This CONFIG.SYS fragment (*Figure 1*) shows my solution. It lets you return to a "parent" menu by listing the parent as if it were a submenu of its child. Note that in every submenu, DOS is instructed to create an entry called Previous Menu, which selects the previous menu as if it were a submenu of the current one.

And if you get more than two-levels deep, you can return directly to the main menu by selecting Main Menu. I know of no-one else who has discovered or used this technique.

- Tom Hard

Editor's note: The easy way to get back up from a submenu is to press **<Esc>**, but it's quite true that you can insert any menu as a submenu, nesting as much as you need. This relies on the fact that DOS doesn't keep a record of where the user has been or which menu was a submenu of another. There's no internal stack to overflow, so you can go round and round before your final selection without triggering any error. You'll find lots of details about this in our March and May issues (pages 183 and 190, respectively). I'm afraid your discovery isn't new — you just didn't find PC World in time . . .

Cutting codes in WordPerfect for Windows

It's easy to cut and paste text in WordPerfect for Windows, but cutting and pasting a special code (for example, a hard return) is difficult. If you open the Reveal Codes window (**<Alt>+<F3>**), you'll probably be disappointed to discover that you can't highlight special codes in that window with the mouse, cut or ▶

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- 21 Government — State/Local
- 14 Armed Forces
- 04 Public Utilities/Transportation/Communications
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- 07 Agriculture/Mining/Construction/Oil & Refining
- 12 Health & Health care/Medicine/Medical Services
- 09 Education
- 23 College/University
- 24 Elementary/High School
- 11 Printing/Publishing/PR & Advertising
- 19 Other Professions
- 22 Engineering & Architecture
- 08 Business Services/Real Estate
- 13 Law
- 20 Other _____

THE HELP SCREEN

STAR-DOT-STAR

copy them to the Clipboard, and then paste them elsewhere.

Fortunately, there's an undocumented trick that will help you get around this problem. While you're within the *Reveal Codes* window, move the selection point to the character before the code you want to cut or copy. Press the Select key **<F8>** which allows you to select text using the cursor keys rather than the mouse. Press **<Right>** until the code or codes you wish to cut or copy is greyed out. Use menu or keyboard commands to copy or cut the special codes, and paste the special codes where you want them in the *Reveal Codes* window.

— William Carlson

Editor's note: Before I read this tip, I (like many other WordPerfect for Windows users) used a much more awkward technique to cut and paste special codes: I tried to select the codes in the document window (where they're invisible) using the mouse while simultaneously monitoring my progress in the *Reveal Codes* window. William's technique makes far fewer demands on your hand-eye coordination and allows you to select exactly what you want on the first try.

A disk by any other name

My PC has a 1.44Mb A: drive and a 1.2Mb B: drive. I often need to copy files between two floppy disks of the same size — that is, from one 3½in floppy disk to another, or from one 5¼in floppy disk to another. But if you try to issue a COPY command with the same drive identified as the source and the destination (for example, **COPY A:FILE.DOC A:**), you get the error message "File cannot be copied onto itself".

The obvious solution is to copy the files first to the hard disk and then to the second floppy. But here's another method that lets me copy directly between two floppies without the intermediate step: I add two brief commands, **DEVICE=C:\DOS\DRIVER.SYS /D:0 /F:7** and **DEVICE=C:\DOS\DRIVER.SYS /D:1 /F:1**, to my CONFIG.SYS file.

The commands create two "alias" drive letters, D: and E:, that refer to drives A: and B:, respectively. (The letters of the aliased drives may be different on your system depending on how many drives you have.) Now, when I want to copy files between two floppies of the same size, I can use a command such as **COPY A:FILE.DOC D:**. Instead of rejecting my request, DOS will prompt me to swap disks and copy the files.

— Mugur Popescu

Editor's note: This tip uses the DOS device driver **DRIVER.SYS** to create aliases for your floppy drives. If you use this technique, make sure to modify the **/D:** and **/F:** parameters in **DSKALIAS.BAT** to correspond to the disks on your system. The **/D:** parameter selects a physical

drive — 0 is A:, 1 is B: and so on. The **/F:** parameter selects a density for the aliased drive. For a list of the possible values for this parameter, consult your DOS documentation or query the on-line help program with the command **HELP DRIVER.SYS**.

Another tip: it pays to use the **XCOPY** command, rather than **COPY**, with this technique. Why? Because copying files between disks in a bunch rather than one at a time (as in **COPY**) can spare you time-consuming disk swaps.

Finally, **DRIVER.SYS** has one minor drawback you should be aware of. When you load a program that insists on looking at every drive in your system to see what's there, you may see a message from DOS asking you to insert a disk in the "phantom" drive. When you get this message, you don't actually need to swap disks. Just hit **<Enter>** to continue the program.

Spaces can speak volumes

When you format a new disk and you assign a volume label to it, DOS will not allow you to include a space in the volume label. This is too bad, because it prevents the use of a name that's easy to remember, such as **DISK 1** or **DATA DISK**. Fortunately, you can get around this restriction by using ASCII character 255 (press **<Alt>** and enter **255** on your numeric keypad). This character looks like a space, but DOS doesn't treat it like one, so you can use it when you want to create a volume label that appears to contain a space.

— Andrew Kooi An Di

Editor's note: Internally, DOS stores volume labels the same way it stores file names — and applies the same restrictions to them. This means that some special characters (such as ASCII code 255) are allowed, but spaces aren't. The technique mentioned here is the only way to place a space in a volume or file name.

There is one thing that you have to keep in mind if you use this technique. Some utilities, such as **FDISK**, ask you to type the volume name before doing something drastic to the disk, such as reformatting it or removing a partition. If you use such a utility, you must remember to press **<Alt>** and type **255** on the numeric keypad again when typing the volume name, or else the utility will reject your request.

Since the odds are that you won't repartition or reformat a disk (especially a hard disk) until long after you've named it, be sure that you make a note of the special character in the name. If you use ASCII code 255 in file names, similar warnings apply. Typing the code every time you want to open a file is cumbersome, and unenlightened users who have access to your files may be unable to figure out how (of course, that may be what you want).

Brett Glass



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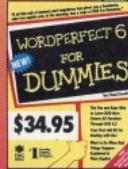
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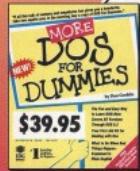
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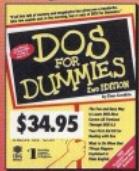
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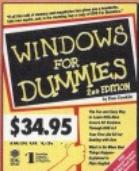
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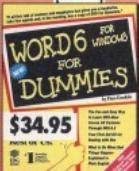
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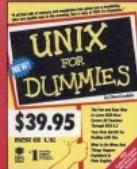
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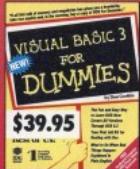
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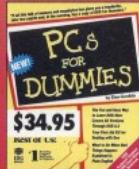
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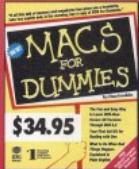
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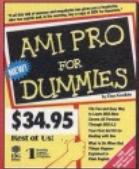
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Help by phone

Locking Excel cell doors

Q How can I protect (lock) a single cell in Excel 4.0?

A Select the entire worksheet and change the cell protection to Unlocked. Select the required cell and change to Cell locked, then enable worksheet protection.

Word 6.0 talking down to 2.0

Q How can I create files in Word 6.0 that can be read by Word 2.0?

A Use the *Save As* option in the *File* menu, then select the *Word 2.0* file format in the list box at the bottom of the dialogue box.

Nothing to see, nothing to print

Q I have entered some data into a Microsoft Works spreadsheet, but when I print it I get a blank page. *Print Preview* also shows a blank page.

A Your spreadsheet *Print Range* is set to cell A1 only. Set *Print Range* to cover the whole document.

The image, the whole image and . . .

Q I changed the view in Word for Windows 6.0 to Full Screen and now I can't get back to Normal view.

A Press *Esc* to close the full-screen view mode and return to normal editing.

Ice-cold Excel

Q I want to freeze the column titles at the top of a worksheet, so they stay in view while I scroll the worksheet.

A Set the cursor in the cell below and to the right of the rows and columns to be frozen (for example, cell F2 if you want to freeze the first row over six columns). Then select *Window Freeze Panes*.

Importing IMG into Word for Windows

Q How can I import graphic files in the IMG format into Word for Windows?

A You can't do it directly, but you can convert the file to a format that Word for Windows can handle. Various drawing and graphic editing programs can do the conversion; if you don't have one or can't justify the expense of getting one, there are shareware programs that can do conversions, such as Graphic

This is a sample of items from The PC World Help Line for software support. We have worked a special deal for our readers, who can now subscribe to the Help Line (see the ad on page 195). The PC World Help Line is supported by Digital Equipment Corporation

Workshop and PaintShop, which should be available on most bulletin boards and from shareware vendors.

It's a frame-up

Q I want to insert a scanned image (saved as a TIF file) into a WinWord document, but I have trouble keeping the picture still and can't type a caption next to it.

A There are two ways to do this. Either insert the frame first, then insert the picture into the frame; or select the already inserted image and then insert the frame. You can now size and move the framed picture and put text next to (or around) it. If you want to pin it down in a precise place, select *Format-Frame* and deselect *Move with text*.

Microsoft Project part-timers

Q I want to assign part-time resources to a project. There are three resources, which are only available for half of the time in a day.

A Use the resource calendar for the particular resource and specify the hours they are able to work on specific days, for example 8 to 12. Otherwise, specify units as 0.5 in *Task form* for that particular task.

Preview of lost memory in Excel

Q I got a "Not enough memory" message when I tried to perform a Print Preview in Excel 5.0. The size of the file is 142K and it has worked well before.

A Restarting Windows cleared the problem. A network utility was identified as the culprit; it had taken some memory and hadn't released it.

First trousers, then shoes

Q When I try to start WordPerfect for Windows, I get an error message "This program needs Microsoft Windows": but I do have Microsoft Windows.

A It's not enough to have Windows on the system; you have to start it before you try to run a Windows application. The easiest way to avoid this trouble is to add the line WIN to the end of your AUTOEXEC.BAT file. ■

I see the light!

In the past we've looked at various ways to make your work area more productive. For instance, how many of you cut a hole in your desk as suggested a couple of months ago? It's probably time to re-state some of the basic ideas about good working conditions. Most of these hints will cost you nothing, but may keep you healthier and more productive.

It goes without saying that a little bit of time spent in designing and setting out your workspace can yield great dividends, yet how many of us simply put up with things as they are. Light is an obvious requirement, but what sort of light, and where should it come from? Probably the worst situation is a typical room with one light fitting in the centre of the ceiling.

Not only does this fitting usually give insufficient light, but just about any way you place the desk causes problems. You either face one of the walls and therefore cast a shadow on your work, or you face the centre of the room, and have the light in your view, causing eyestrain.

On your side

Good lighting for desk work is diffused, and to the side of the worker. Coming from the side has an other advantage for computer users — the light doesn't hit the screen, causing glare. Fluorescent lamps give diffused light, cost little to run, but do flicker at 100Hz. Experts can't agree but many say this flicker causes fatigue and headaches.

The new compact, long-life fluors operate at a much higher frequency and don't cause this problem. Normal incandescent lamps don't flicker but they do add heat to the room and are usually a point-source of light, unless in a shade or diffuser fitting. Desktop Halogen lamps give a very bright light, but unless they have special UV filters, may emit excessive UV which has been linked to skin cancer.

Of course the most natural form of light is sunlight coming through a window or skylight. Again, try to avoid the light coming from

in front of, or behind you. A good way to place the desk is side-on to the window. If the area is to be used at night also, consider fitting a white blind to the window. This will reflect the existing room lighting and give similar conditions to daytime (as well as stopping some of the heat-loss through the glass). If the sun will be in your eyes during the day, consider fitting vertical or Venetian blinds so the light can be kept from your eyes, but still reflected into the room.

Another important aspect of lighting is balance. Not only must the light be adequate, but it must also be balanced around the work area, and that means the screen too. Your work conditions should be such that the screen is about as bright as the surrounding area. If there is a significant difference, your eyes will have to constantly adjust as they move from screen to paper or other parts of the desk. Most experts agree that having a white screen with black writing is best — like the default in Windows.

And while we're on the subject of screens and paper, it doesn't make sense to get the lighting correct but the placement wrong. The best place to have the paper you are referring to is right next to the screen. That reduces head movement and eye re-focusing — both guaranteed to lead to fatigue.

Screens

Some people swear by their glare reducing filters that fit over the computer screen. These are usually some sort of wire or plastic mesh that does seem to reduce glare, but also reduces screen brightness. They also seem to make the image clearer, but in fact this is an optical illu-

sion, as they really make the image less-clear. Modern monitors have anti-reflection coatings and don't need these devices.

In any case, get rid of the problem by moving the monitor or the source of glare long before getting a filter.

The other sort of filter you might be encouraged to buy is the anti-radiation filter which is claimed to block the harmful electromagnetic radiation coming from the screen. The jury is still out of the whole subject of radiation from electronic devices, but there is probably much more danger sitting in front of someone else's monitor, especially when your head is very close.

Whatever you do to make your workspace more efficient and healthier, remember that sitting in front of a screen for long periods is unhealthy. There are two things to do here — get up or exercise at the screen.

Make a habit of getting up at least every hour, and going for a five minute walk (though not necessarily to the doughnut box in the kitchen or to the front steps to have a cigarette).

Even staying at the desk you can do things to relieve tension and exercise the parts. In a later article we'll list some exercises for the eyes, neck, limbs and so on.

Paul Zucker

Long distance irritation

Now for something completely different. Faxes. Many *Australian PC World* readers have fax machines in their small business offices or even at home, it seems appropriate to mention some of the do's and don'ts of faxing.

If you really want to annoy the person you're faxing . . .

Send a two-line message on an entire sheet of paper. People like to waste their fax paper on blank sheets.

Send a cover page on all transmissions, especially when the message is just a couple of lines.

Fax entire catalogues to people on the off chance that they really needed a forty seven page list of agricultural pumps and spare parts.

Send rude, sexist, offensive faxes. (You know, the sort of pages that get photocopied and faxed around the office.)

Write everything in blue biro so received fax is blank.

Send photos without using the "photo" or "halftone" button.

Don't set the "ID" on your fax machine. That way people will have to guess who sends them a scrawled message "I'll be around for the cheque in an hour".

Create a TIFF file that's 18 metres long and fax it to your enemies via your fax card.

If you don't want to annoy them . . .

Tear standard A4 sheets into thirds. These will hold quite a large message, but only use a small piece of fax paper at the receiving end.

Why not design a small sheet that includes your cover page information and space for a hand-written message.

Ask first, or if you really can't help yourself, mail the pages — that way the recipient doesn't have to pay for the fax paper.

Respect the owner of the fax machine. Is it used by just one person or will younger family or staff members see the faxes?

Blue is almost invisible to most fax and photocopy machines. If you have to send it, either photocopy it first to make sure it is clear, or use the "light" button on the fax.

Photos sent via normal fax settings are usually received as black and white blobs. Use the correct settings. If in doubt, use the "copy" button to see how the fax will be received.

Set your ID and time correctly, and don't forget to adjust the time for daylight saving.

If it makes you feel that bad don't do it.



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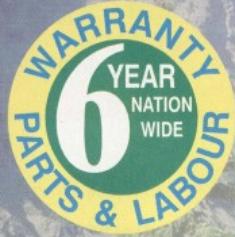
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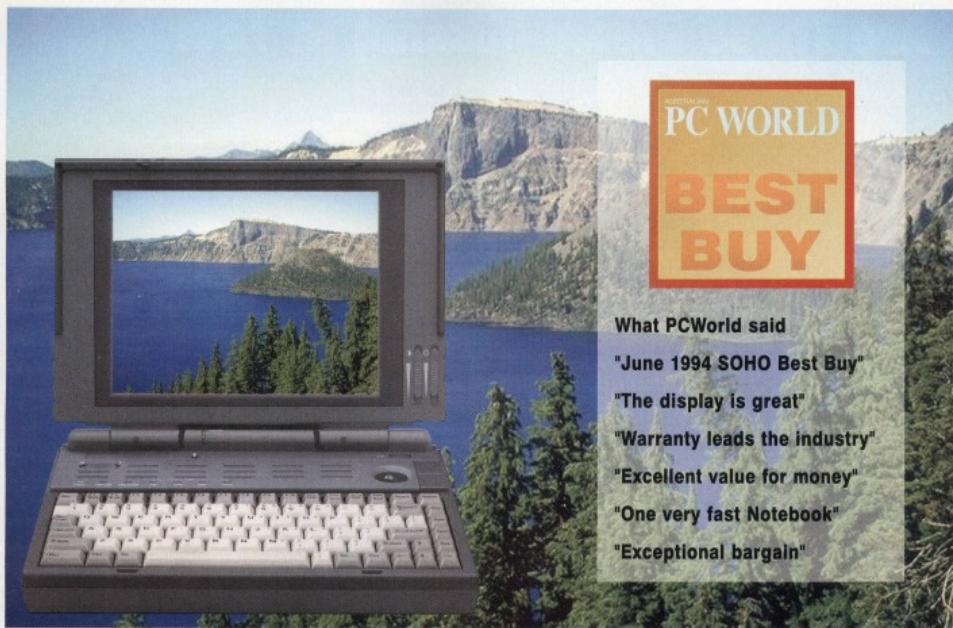
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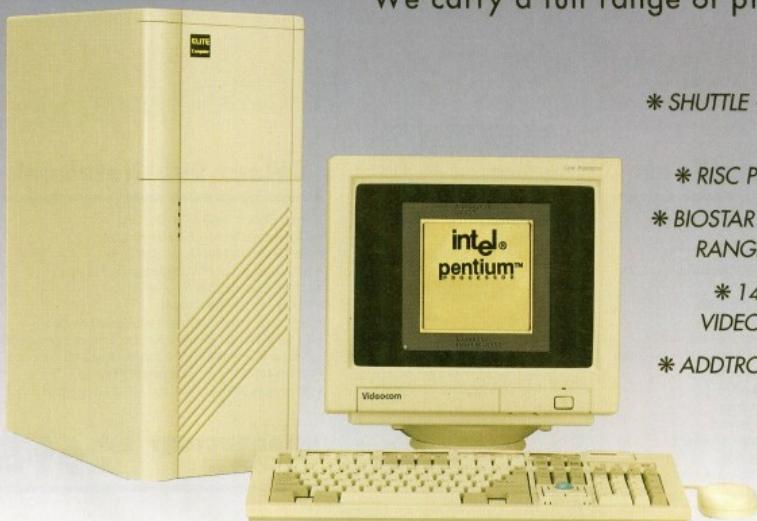
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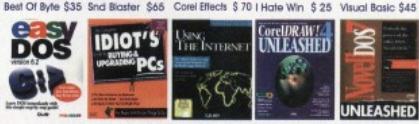
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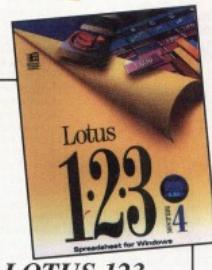
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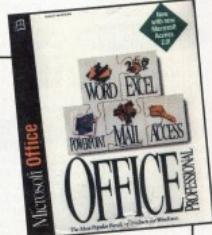
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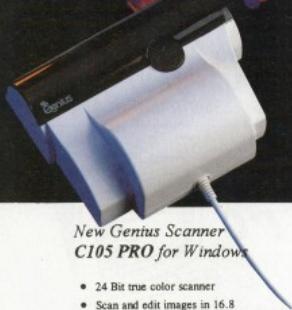
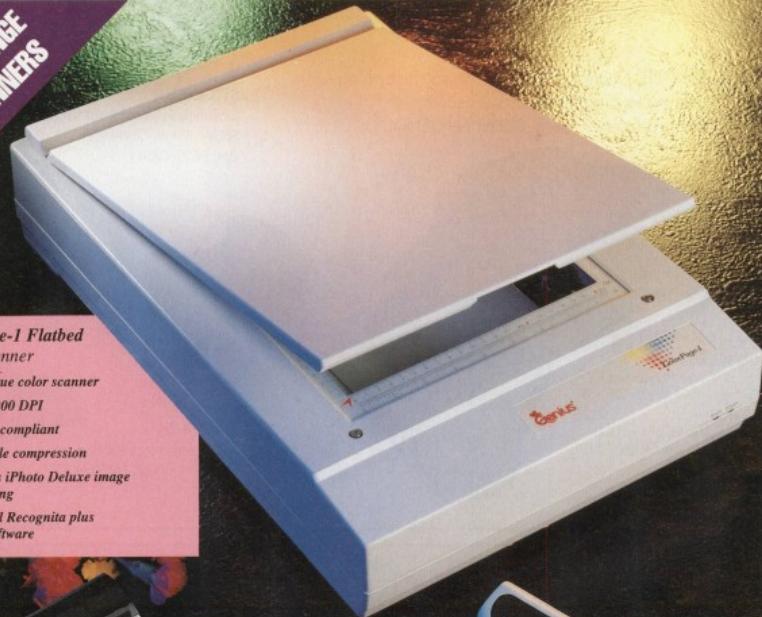
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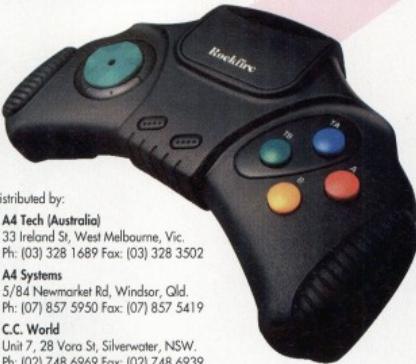
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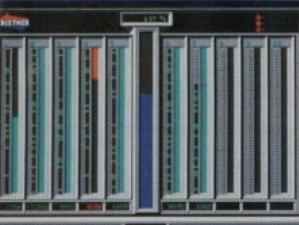
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ID. & Graphics	YES	NO! Text only.
New program concept	YES	
Available systems to guarantee 5 out of 6	27	NONE
Method of generating reduced systems	DATABASE	Simple wheeling.
No. of systems wheeled	NONE	256 ?
Number of integrated system databases	8	NONE
Number of integrated results databases	4	NONE
All past results for all states included.	YES	YES, Incomplete
3 system's coal levels.	YES	NO
Systems set up with automatic predictions.	YES	NO
Systems result check with automatic update.	YES	NO
Auto results updating, Systems updating and editing.	YES	NO
Automatic multi-system comparator.	YES	NO
Ultima multiscan with optimised predictions.	YES	NO
Multiscan future trend	YES	NO
Full statistical display from 1 to any draw.	YES	NO
Auto coupon printing preset for all states.	YES	NO. Manual set with text output.
Program setup option to update any changes	YES	NO
Baxed and shrink wrapped with manual and 3 disks.	YES	NO. 1 Envelope with single disk.

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Lottonet Systems are pre-computed, not wheeled and fully optimised for maximum win at minimum cost, with equal chances of winning as full cost systems !!

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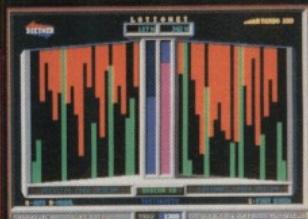
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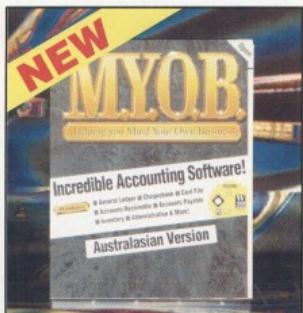
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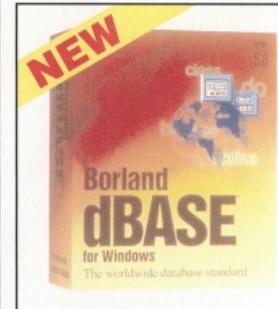
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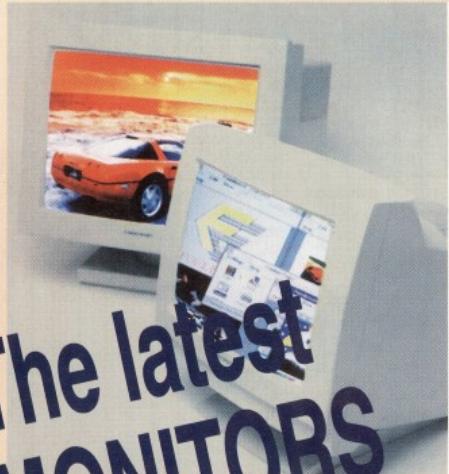
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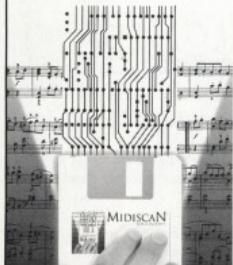


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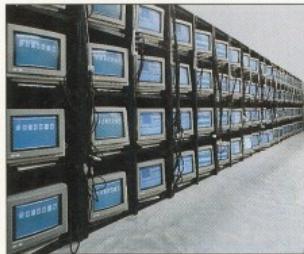
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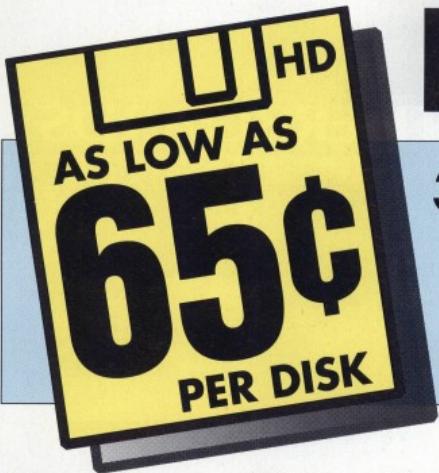
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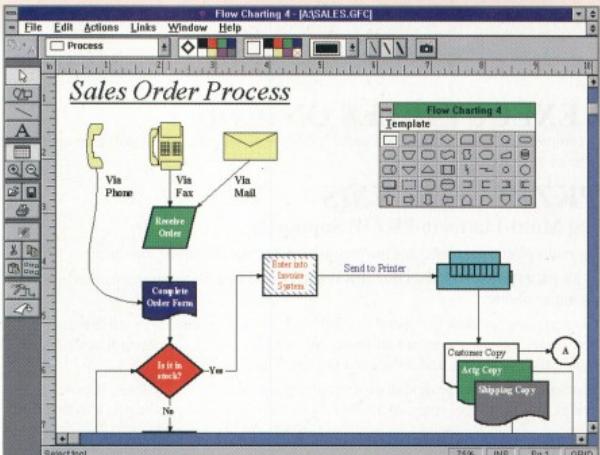
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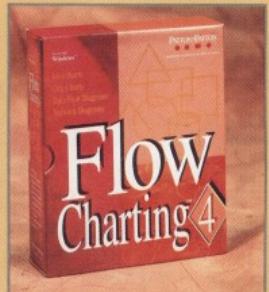
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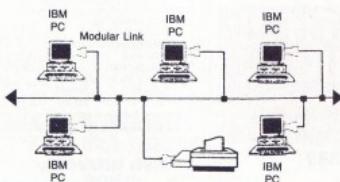
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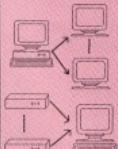
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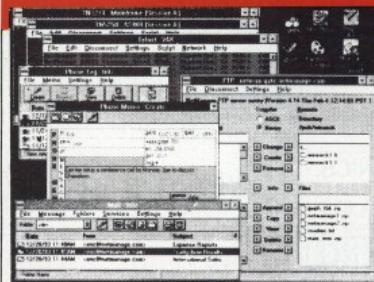
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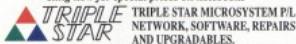
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Getting connected

Telix for Windows is a communications program that provides problem-free connection to on-line services

Everyone, it seems, has at one time or another used Telix. For those not in the know, Telix is a DOS-based communications program that has the enviable reputation of succeeding where all else fails — if you're having problems connecting, try Telix. As a result, it was a de facto standard of DOS-based communications programs and one of shareware's most popular offerings, although lately it has been showing its age. Finally, though, DeltaComm in the US has released Telix for Windows, which is available and supported in Australia through My Computer Company (theirs, not mine). While the copy I've been reviewing at the time of writing is a late beta version, I can confidently say that it was worth the wait — I've been connecting to my usual on-line

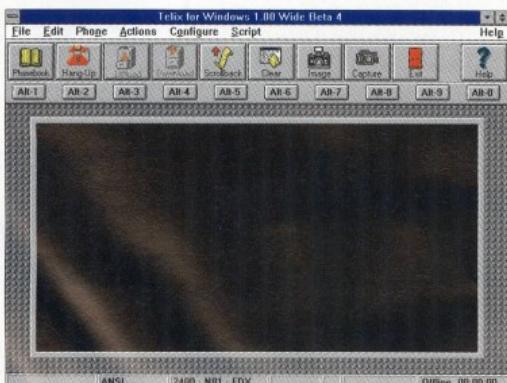
services using Telix for Windows for the past week, downloading files and sending e-mail without a hitch.

Getting started

Telix for Windows' main screen is well laid-out and what you would expect from a Windows program, with clear, logical icons for the most common functions. If it's not to your liking, you can change the appearance of most of the screen from the Configuration menu, adding fancy borders, choosing to keep the status bar active, or removing the icons or icon text.

The program comes with a "generic" modem configuration, which will work with most modems. I first used Telix for Windows in this configuration without changing any settings and had no problems with two different modems. However, My Computer is attempting to add as many recommended modem configurations from Australian manufacturers as possible, and most US modems are supported by the program. You can also manually set up the relevant commands, from the initialisation string to the dialling commands.

Most other features can also be readily configured from the Configure menu. You can set up various expense files to show how much a certain on-line session is costing, and factor in for off-peak rates and so forth. There are eight "flash-keys" on the main screen which you can set up with macro scripts to perform common functions at the click of a mouse, and you can also set up macros for your keyboard. There are a number of sound files supplied which you can configure to coincide with various events. For example, you might use a warning sound to notify you if a download was unsuccessful. Most common protocols for downloading or uploading files are supported, including ASCII, Z-modem, Xmodem, and Ymodem



Telix for Windows main screen is well laid-out with clear, logical icons

of varying flavours. Additionally, Zmodem can be set up to perform automatic downloads and there are various character stripping options to maximise the effectiveness of ASCII transfers.

What's new?

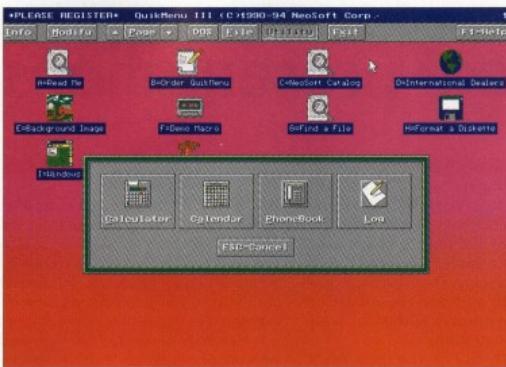
The two Telix scripting languages, SALT and SIMPLE, are still there and according to deltaComm have been enhanced and upgraded. One feature that hasn't been implemented before is support for RIPscript graphics terminal emulation, which is compatible with the graphics found on many on-line systems, allowing you to interact with icons and graphic images/text on such systems. There is also a graphics viewer, so you can view graphic images before downloading them.

The phonebook manager is also a great improvement and better than anything I've seen in comparable programs. You simply click on the Phonebook icon in the main screen and your default phonebook will appear — you can have numerous phonebooks if required. In the phonebook itself there are icons for editing the number, dialling — either one of the selected entries or manually dialling — and you can also print-out the phonebook. From the menubar there is also a search and replace function, and selections for sorting and managing the various entries.

Availability

The official release date for Telix for Windows is June 15, so by the time you read this it should be available. Registered versions will cost \$185, with upgrades from DOS versions \$90. Crossgrades from other DOS or Windows communications software are also available for \$99.

Telix for Windows is still shareware, and you'll be able to download a copy from the My Computer Company bulletin board (02) 565 1044, which I recommend to compare it with your existing communications software. At the moment, I'm deciding between Telix for Windows and Unicomm (available from Manaccomm (07) 368 2366 and reviewed in PC



QuikMenu
includes utilities
such as a
calculator,
calculator and
phone book

World Feb '94). I like Telix's configurable screen layout and phonebook manager, but Unicomm has a few neat tricks of its own, such as Host Mode and a download file processor, and it's also cheaper to register than Telix for Windows.

For more information on Telix for Windows contact My Computer Company on (02) 565 1991.

Something for DOS users

Just when you thought everyone had forgotten about DOS users, along comes NeoSoft with a major upgrade to QuikMenu, a graphical user interface for DOS without the memory overheads of MS Windows. In fact, NeoSoft is quickly establishing a reputation for giving new life to the old DOS, with programs such as NeoPaint (see *PC World*, October '93) offering graphical interfaces that had been previously only available in Windows programs. Along with programs such as NeoBook, a multimedia authoring system, and the presentation software NeoShow, QuikMenu 3.1 (notice the familiar version number) further enhances this reputation.

QuikMenu is arranged with a main screen of icons which are set up by the user to launch programs and files, and a series of buttons at the top of the screen that are used to manage the icons and their respective files, as well as access

various QuikMenu utilities, DOS or QuikMenu's own file manager.

Some of the included utilities/features of QuikMenu include a calculator, calendar, phonebook and log (for logging how often and when you use each program), a macro utility, password protection for programs/files, and icons that allow the user to format disks, change the background screen, or search for files. Icons can be imported from Windows and there is also a built-in icon editor that can export icons as .PCX images or in NeoPaint Stamp and Windows icon formats.

There is a built-in, context-sensitive help system, although the program is easy to follow and use. In fact, I'd say new users would find it easier to get up and running than Windows.

QuikMenu 3.1 replaces both the retail QuikMenu III and shareware QuikMenu 1.07 and is available as shareware. The upgrade price is \$30 or \$49.94 to register for new users. Network versions and site licences are also available.

QuikMenu 3.1 is available in Australia through Manaccomm on (07) 368 2366.

- Geoff Long

• Correspondence on shareware, free-ware, and public domain programs can be sent to Geoff Long c/o Australian PC World or by e-mail to glong@peg.pegasus.oz.au

Great presentations

Dentists have bad teeth, General Practitioners always have bad colds, and computer publications like PC World have incomplete PC networks. At the launch of the next version of a major presentations graphics package, the audience was subjected to an hour-and-a-half of speeches, demonstrations . . . and more demonstrations.

One of the manufacturer's claims was that the software makes presentations easier to construct, with tips for users so they can create "great presentations". Maybe they should read the instructions, especially since one or two in the audience were observed nodding off.

You show me yours

The latest copy of Banksia's newsletter has a picture taken at the PC94 show in Sydney. It shows part of the NetComm stand where two Banksia modems are in use alongside four NetComm modems. The caption said "Perhaps even NetComm have discovered that Banksia's quality and reliability is the best.". NetComm told BackBytes that . . . (still waiting for answer).

The unkindest cut

A North Sydney-based computer company wielded the razor in late June. Many people went out the door that day, and one of them is still wondering what happened.

He had been head-hunted by another company and had spent days working up the courage to tell his boss why he was going to leave and take a job for almost 40 percent more money. He was saved the trouble when the chop came and he was ejected onto the street with \$12,000 in severance pay! Oh yes . . . his boss got the chop too!

Not-so-software

The recent home computer show in Sydney got plenty of coverage in the press, but not for the right reason. The attention was caused by a couple of companies using the show to sell the sort of software a young lad doesn't show his mother.

Hundreds of X-rated titles covered the walls of two stands, inviting showgoers to buy titles like: Desktop Mistress; Barely 18; Girls with Girls; Deep Throat; Debbie Does Dallas; Three and More; Camp Double; Graduation from F.U.; Digital XTC and so on.

And if pictures aren't your thing, there were X-rated sound-only disks like "Phone Sex". Prices ranged around the \$40-50 mark.

Giant US computer show Comdex has announced that it will no longer tolerate sex. No displays of sex-related products and no sex to be used for promoting products or companies.

Did you know?

- A Melbourne clone maker has been shipping "fully-tested" PCs that didn't have a processor chip.
- That the Asian-made PC may have a slow processor in fast clothing. Some people are taking legitimate processor chips and re-printing the information on the top of the chips, making them seem faster than they are. The alternative is to simply glue a fan on top so you can't even see the writing.
- Australians may eventually have a law that makes it illegal for computer devices to blank out all radio and TV within a 200m radius.
- Microsoft has been working on a set of migration tools codenamed "Visine". They are designed to allow NetWare 3.x users to move to the next version of Windows NT. Visine — "to get the red out" — get it?
- Most computer magazines have bulletin board systems so journalists and PR companies can submit stories and graphics. One Melbourne-based magazine was recently sent a file from its Sydney office, late on Friday. Coming back into the office on Monday morning both offices found the connection still working perfectly. Let's see . . . 62 hours connection at STD rates . . .

Here piccy piccy

And talking of naughty pictures, you have to feel sorry for the person who was running the screen saver that comes with a couple of the Corel CD-based products. It works its way through the BMP, GIF and PCX file on the CD, displaying each for a few seconds. Unfortunately he didn't have the CD loaded so the program worked its way through the graphics files on his hard disk, just reaching his "Penthouse Pets" collection as the boss walked by!

Nested options

Lotus has been offering its cc:Mail users two add-on products, for the same price. One is Automatic Document Exchange and the other is Import-Export for sharing directories. Mind you, you'd be mad to buy both as the first contains the second! ■

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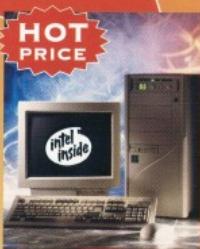
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